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IONIC MEDICATION.

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I do not intend to-night to bring before you anything really novel or very striking, and perhaps it is as well so, for the average medical man is apt to view in a sceptical manner anything approaching the sensational, more especially when it emanates from an electro-therapeutist. Indeed, it is not to be wondered at, considering the unwarranted claims made for electrical treatment by men whose judgement has been warped by the psychical efforts produced upon themselves, as well as upon their patients by the mysterious agent they employed, and considering the abuse of this treatment by ignorant and unscrupulous quacks. No other branch of medicine lends itself so readily to quackery as this, with its imposing outlay of weird-looking machinery, the snapping sparks and luminous effluves of high frequency discharges, accompanied by an odour of fire and brimstone (in reality only nitrogen pent-oxide), the effects of invisible, interrupted currents on the muscles, causing involuntary contractions and peculiar sensations, etc. All these things themselves act on the various organs of sense of any impressionable individual, and it is no wonder then that powerful psychical impressions are produced, and lead to wonderful statements being made by such individuals, and marvellous (temporary) cures occurring in those whose ailments have no physical basis.

In ionization, however, the apparatus used need not be either cumbersome or imposing; the application is quiet and simple, and the current strength regulated by the feelings of the patient, so that pain is not produced, or is not severe if present, and so that the results are not so likely to be exaggerated, as in other more showy modes of application. I will not weary you with modern electrical theories of ionization, and a host of technical details. Those who are interested in that part I refer to Professor Stephanie Leduc's book on "Electric Ions and Their Uses," and Dr. Lewis Jones' little treatise on "Ionic Medication." I shall confine myself as far as possible to the practical part, and as I have, in the course of the last three years, treated a dozen medical men by ionic medication, I ought to have at least some reliable information to give you on the subject. Dr. Lewis Jones gives the following definition of ionic medication, or "ionization," as it is usually termed.

"Ionic medication is a method of treatment in which electric currents are used for their power of setting constituents of a saline solution in orderly motion in a definite direction. From the point of view of electrical conductivity, the tissues of the body may be regarded as a saline solution, and the laws of the conduction of electricity in solutions may be applied to the interpretation of the effects

of currents traversing the tissues. Ionic medication is used for the introduction of drugs into superficial parts of the body through the surface, and also for modifying the chemical constitution of parts of the body such as joints, fibrous tissue or nerves, by setting up chemical interchanges throughout their substance."

To apply this form of treatment one requires some means of supplying a direct current of sufficiently high electro-motive force (or voltage)—it may be a direct current lighting main, wet or dry cell, or accumulators, or some special apparatus for converting an alternating to a direct current. Having obtained a suitable current supply, the next thing necessary is some reliable means of regulating the current, so that it may be raised slowly and evenly from zero to the necessary strength, without any chance of interruption. To accomplish this, a reliable, finely wound shunt rheostat is necessary. If the current is used direct from the main to a rheostat, it is first passed through a lamp, which acts as a resistance, and a safeguard as well; but in such a case, the possibility of the patient becoming connected with earth by touching pipes or metal connected therewith must be guarded against as a severe shock might result, even with a lamp in circuit.

To measure the amount of current passing, a milliamperc-meter should be attached to one pole. Connecting cords should be of stout, many stranded, insulated, flexible copper cable, firmly fixed by binding screws at either end. There should be no loose connexion whereby the current might be broken, and thus cause shocks to the patient, which would be very unpleasant and painful. Electrodes of various shapes and sizes are sold by most instrument makers, but are usually unsatisfactory, and I find that it is better to make them oneself. Thin sheet lead is readily malleable, and can be cut the required size, a narrow tail being left to affix to the binding screws on the cables. The latter I use are of the barrel type. The screws should always be examined and tightened up securely before the current is turned on, and the end of the cable bandaged to the limb to prevent any sudden jerk on the electrode and its connexion.

The most useful electrodes I find, however, are copper woven pot cleaners, into which some fine copper wire is fixed to form a connecting tail. They are cheap and most flexible. They can be folded up to a small size or spread out as widely as is necessary. In fact, I always use them, except for very small surfaces.

The best pad for conveying the electrolyte to the part is the ordinary unmedicated cotton wool. It is advisable to place over this a couple of clean surgery towels, wrung out in the solution of the drug to be used, whose strength may be from 1 to 3%. This forms the active electrode. The indifferent

pad consists of a couple of towels wrung out in 1% sodium or ammonium chloride. I prefer the latter, as the ammonium ion is less irritating than the sodium, if the positive pole is the indifferent one. This electrode should always cover a larger surface than the active one.

The important point to remember in determining which electrode to use is that the basic ions such as zinc, copper, quinine and the like pass from the positive pole into the tissues, while the acid radicles, such as chlorine, iodine and salicyl, pass from the negative pole.

The pads, having been placed in position, are covered by the electrodes, and firmly bound in place with elastic bandages, care being taken that the pad lies smoothly in contact with the part. The current is increased very slowly till it is as strong as can be comfortably borne by the patient, and its strength noted. If there is any marked stinging at any point after a while it should be turned off and an examination made to ascertain whether there is any blister forming, whether the metal is touching the skin, or whether there is a pimple. Should one of these defects be found, the spot should be covered with a little adhesive plaster, and the pad re-applied. It is always as well to clean the skin of any grease with soap and water, or ether, before applying the pad, especially if any ointment or greasy application has been used previously.

The principal ions I have used are the zinc, copper, salicyl, chlorine and iodine, most frequently zinc or salicyl. Zinc ions I have used for a considerable number of years, chiefly in the treatment of small rodent ulcers, moles and papillomata. In this class of case the growth may be ionized by transfixing it in different directions with zinc needles fixed to the positive pole, allowing the current to pass till the part turns white. The coagulating effect of the zinc causes the needles to become fixed, and it is therefore advisable to run the current the opposite way to loosen them before withdrawing them. Or else a flat-ended zinc rod or plate is attached to the positive pole and held firmly against the growth, the current being increased till it is as strong as the patient can bear it, and left on for fifteen to twenty minutes, according to its strength. The growth is infiltrated with metallic zinc, and in a day or so a blackish, sterile scab forms, which separates in about a week or ten days. If necessary, the treatment can then be repeated. However, in such conditions I use radium when possible, especially if there is any suspicion of early malignancy, as I consider the rays from the radium more searching than the ions, and recurrences are less liable to occur after its use. In a number of cases the zinc ions give a satisfactory result, and the treatment is quicker, and less expensive, than with radium.

It is in localized infected areas that the value of zinc ionization is so well shown. In these cases, its sterilizing action is very powerful, penetrating, as it does, into the tissues and into every crevice of a wound, whereas antiseptic lotions merely cleanse the surface. Theoretically, it should act satisfac-

torily, and practically it does so. One has only to see the rapid healing of boils, carbuncles and infected wounds to be convinced.

Carbuncle.—I reported a case in the "Australian Medical Journal" in which the result could not have been better, and I have recently heard of a severe one in a diabetic patient treated at the Ballarat Hospital, which gave an equally satisfactory result. The method employed was as follows: A pad of sterile gauze is wrung out in 2% zinc sulphate solution, which has been boiled; the cavity is packed with this gauze, after it has been syringed out with the zinc sulphate lotion, and a second pad of gauze soaked in the lotion is applied, covering the whole wound. The positive electrode is then bandaged on to the covering pad, and a current as strong as the patient can bear is applied for thirty minutes. It is surprising to see how rapidly and quickly the sloughs separate and inflammation subsides under this treatment—a clean and healing surface is always obtained.

Boils, too, clear up in a similar manner. If they have not burst, a zinc needle is inserted, and the current passed and then reversed before the former is withdrawn. A zinc sulphate pad is placed over the boil, and the current again passed for a while. The pain and throbbing are relieved at once, and healing takes place within a short time.

Ulcers.—In chronic ulcers of the leg resistant to all other methods of treatment, I have seen healing take place with remarkable rapidity after ionization. If they are of the painful variety, the pain is relieved by first ionizing with cocaine, or by adding a little cocaine to the zinc sulphate solution. The cocaine ion passes in from the positive pole, together with the zinc, giving its usual effects. The current is passed till the zinc renders the surface of the ulcer whitish, and in a day or two it presents a clean, healthy surface, and is free from foetor and pain. Unhealthy granulations disappear, giving place to a clean healing edge. If the ulcer is small, healing occurs under a sterile scab if dry dressings are applied; if it is large a moist dressing should be applied.

Paronychia lasting some months I have seen clear up rapidly as the result of a single treatment. The heated solution is allowed to penetrate into the tissue surrounding the nail by immersing the finger for five or ten minutes before applying the current. This condition is usually difficult to treat by ordinary measures, and is so obstinate that it is very pleasing to find a remedy that can be easily applied to a very inaccessible part. From the satisfactory results obtained in these cases I feel satisfied that septic cavities could often be effectively sterilized when opened by operation, and healing thereby often greatly hastened. Ordinary lotions used to irrigate the interior of these cavities do not penetrate, but leave the organisms in the walls untouched, whereas ionization causes the antiseptic zinc ions to come into contact with all parts of the tissues to a depth depending on the strength of current and length of the application. This could be done after operation, while the patient was still anaesthetized, and would only take a few minutes,

as, under such circumstances, a large current could be passed. In the case of loculated cavities, where the infected loculi could not be effectively dealt with surgically, this method should be of great value.

I have had excellent results in two cases of alopecia areata treated by this method, the hair returning in three weeks in patches that had been bare for over a year.

Salicylic ionization.—During the last three years I have had a fair amount of experience with salicylic ions in the treatment of neuritis, chronic rheumatic arthritis and peri-arthritis, fibro-myositis, gout, Bell's paralysis, sprains, and especially lumbago and sciatica.

The relief of pain in the majority of cases is rapid and complete, as also is the reduction of inflammation and swelling, and, as a general rule, this relief is not merely temporary, but permanent when sufficient treatment has been given.

Brachial neuritis in two cases has yielded to the treatment most satisfactorily. The negative pad soaked in 2% sodium salicylate solution was placed over the clavicular region and in front, and behind the shoulder, the positive (indifferent) electrode being on the arm and forearm. Relief was immediate, and four or five applications of about 30 milliamperes for half an hour sufficed.

Bell's Paralysis.—In one case, that of a medical man in whom the attack had not been of more than 48 hours' duration when he first came to me, recovery was complete in a fortnight. He had about eight treatments, at first one a day, with the salicylate pad over the affected side of the face, and covering the facial nerve trunk at its emergence from the styloid foramen. He is satisfied that the ionization effected the cure, and certainly it was most rapid. Another case of paralysis which had been present for some time in a young girl, certainly began to mend, and did so rapidly when ionization was carried out thrice weekly, but improvement was not so remarkably rapid as in the first case, and may have been to a great extent the natural course of the affection.

Gout.—The only patient treated was a medical man. He had suffered frequently, and when I saw him the right ankle and great toe were swollen and painful. I applied lithium ions to the big toe from the positive pole, and salicyl ions from the negative to the ankle. The swelling subsided at once, and he was delighted with the relief from pain, which was more rapid and marked in the ankle. He travelled about twenty miles by motor-car on several occasions for further applications, and stated that he had never experienced such rapid relief. He has since come in to be treated for lumbago, with satisfactory results.

Chronic rheumatism of the joints, ligaments and tendon sheaths and rheumatic fibro-myositis, as a rule, yield to three or four applications of salicylic ionization.

The majority of cases of this class I have treated have been lumbago and sciatica. In those cases where the condition was of a chronic rheumatic nature, associated with considerable lumbar stiff-

ness and slight sciatic pain, the results have almost invariably been rapid and satisfactory. Many of the patients gave a history of a strain to the back at one time, and the pain was fairly severe in several instances. When the sciatica is severe and unilateral, especially in a stout patient, and unassociated with lumbar pain, the outlook is much less favourable. The two patients treated by ionization did not benefit at all.

If no improvement be noted after three applications I find it is useless to continue. The persistence of severe sacral pain and unilateral sciatica in these patients is frequently due to the presence of early sacro-iliac disease, even if no other definite signs can be elicited.

I hold the opinion that all cases of chronic and sub-acute fibro-myositis of the back are very satisfactory to treat by this method, and yield rapid results.

I have had more cases sent to me by patients relieved of this affection than by any others. One medical man was especially grateful, as he had suffered from stiffness and pain, involving the whole length of the spinal column, and nothing else gave him relief. In reporting the success with these cases it is as well to remind you that, in the majority of the patients seen by a specialist, all ordinary forms of treatment have failed, and the cases are beginning to worry their medical advisers.

In treating these cases, I place a thick pad of cotton wool and towels under the back. The pad is about 7 inches long and 5 inches broad, and is wrung out in hot salicylic solution. The negative electrode is placed under this, and the patient lies on it. The indifferent electrode is then fixed to the calf or thigh, and the current increased up to toleration, sometimes as much as 80 milliamperes passing. It is therefore important, with such large currents flowing, to avoid the possibility of any sudden interruption, as a severe and painful shock would result. From three to six applications are, as a rule, all that are necessary to bring complete relief. The first three applications are given daily, and the subsequent applications alternate days.

To see rapid relief of pain and reduction of swelling it is only necessary to apply salicylic ionization to a severely swollen, throbbing sprained joint. I treated two medical men who had such a condition, one in addition having the scaphoid bone of his wrist fractured, and they cannot speak too highly of the immediate relief obtained. In fact, I think both of them slept during treatment, and afterwards were free from the burning and throbbing which had caused each a sleepless night.

Chlorine ions are renowned for their sclerolytic action on fibrous scar tissue, especially in pseudo-ankylosis of joints following arthritis. I have not had experience of such cases, but have seen very decided benefit in fixation of tendons, etc., the result of a severely poisoned hand. It is worthy of notice that the little finger of the same hand was flexed right on to the palm, as the result of an injury sustained about twenty years before. Even this finger participated in the beneficial result of vigorous chlorine ionization, inasmuch as it could be

extended sufficiently to allow a shovel being grasped. Iodine ions have a similar effect, I believe, but, in my experience, appear to cause irritation of the skin after a few applications. I have tried salicylic and iodine ionization in chronic hydrops of the knee with only slight benefit, while absolutely no effect was produced on a case of that very rare disease—recurrent hydrops of the knee-joint.

I must not neglect to mention the effect of salicylic ions on inflamed wounds. M. Leduc recommends this treatment. A short time ago I had a wound on my hand, caused by a piece of wood. After a week it became inflamed and unhealthy looking, and was giving me such severe and throbbing pain that I thought I was in for a poisoned hand. I tried ionizing it with sodium salicylate, with the result that the pain and the inflammation were immediately relieved, and the wound healed within a short time.

The increasing use of zinc ions by dentists in pyorrhœa alveolaris, and the results obtained by them, is strong evidence in its favour as an anti-septic application of great potency in a condition practically incurable by ordinary means.

A glance through Dr. Lewis Jones' book on ionization will show that his results are very similar to mine, and I have always looked on him as a most careful and reliable guide to follow. Those who require further evidence cannot do better than to peruse this small volume.

I have limited my remarks to cases treated by myself, in order that this paper may be as practical as possible. There is, however, a much wider scope for this method of treatment, as will be seen from the writings which I have referred to, and the selection of drugs which may be used too, is very wide. I may instance the analgesic action of quinine in neuralgia, with which I am not familiar, and the far-reaching action of radium ions as used by Haret in sarcoma. In the "Medical Annual" of 1914 there is a short article, with a list of conditions amenable to this form of treatment.

I have known cases where ionization was supposed to be applied by persons who had no notion of how the current acted, and reversed the poles at every other sitting. A medical man once asked me why I wouldn't or couldn't use the alternating current for the purpose. If such people undertake to apply this treatment, the results obtained by them will be highly discreditable, and I would suggest that when a case is recommended for ionization it would be well to see that it is applied by someone who is qualified, not only to apply it correctly, but also to select the correct drug and a safe and suitable way of applying the current. It should be applied by a medical man, or under his supervision, if accurate results are to be expected. Medical electricity has suffered much in the past from quackery, and it is the duty of the profession, therefore, to guard most stringently in the future against its inefficient application by unqualified persons.

The following is an extract from a letter I received this morning from Dr. Gerrard, of the Ballarat Hospital, concerning the case of carbuncle referred to:—

"We followed your lines of zinc ionization for a carbuncle of the neck in a diabetic patient, and knowing that you would be interested, Grover and I kept notes of it. I am enclosing a chart, and a copy of our notes. We can both safely say that, in our opinion, the patient would have died but for the ionization, for, despite the usual local treatment of the carbuncle and general treatment for diabetes, the carbuncle continued to spread, and at the start of ionization measured at least 8 inches by 6 inches. On the left side it had involved all the skin over the mastoid process, and lower down had reached half way out to the shoulder. On the right side it had not extended quite so far outwards. Above, it was well over the superior curved line of the occipital bone, and below was nearly two inches below the seventh cervical vertebra." He also says: "Grover cured a ringworm of four months' standing with four applications of iodine ions."

INFANTILE PARALYSIS.

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Since the autumn of 1909 infantile paralysis has become much more common in Sydney. In the summer and autumn particularly, there are almost always a number of cases under treatment at the Children's Hospital. A wider experience of this disease has naturally led to opinions and conclusions as to the meaning of symptoms, differing somewhat from those formerly held. Moreover, a careful study of these symptoms must necessarily throw much light on the functions of different portions of the central nervous system.

Infantile paralysis may be defined as an infective disease, involving any part of the nervous system; but particularly tending to affect the anterior cornua in the spinal cord. There is a difference of opinion as to whether the peripheral nerves are affected or not. Apparently no other organs are involved by this disease, although one should not be too positive about this, in the absence of any knowledge of the causative organism. The morbid anatomy is difficult to study, as the disease in its common spinal type is rarely fatal. Fatal cases are generally of the cerebral type in infants and young children; in adults or older children they are generally of the type of Landry's paralysis. Our own opportunities of studying the morbid anatomy have been very limited, since the disease, as we see it in Sydney, is very rarely fatal. This is a matter of little importance, as the Scandinavian physicians have done good work in this field. Harbitz and Scheele's well-known work is based on the detailed and complete examination of thirteen (13) cases, fatal in the acute stage. These cases necessarily were all of the cerebral or Landry's paralysis type, none of the purely spinal type. They show that the disease is characterized by a tendency to small haemorrhages, rarely larger than a pin's head; the anterior cornua are always the most seriously affected parts of the cord; the adjacent white matter is also involved, though to a

less degree. The posterior cornua and columns are never seriously involved. The pia mater is involved in the inflammatory process, particularly in the anterior fissure. Microscopic examination shows small haemorrhages, a tendency to thrombosis in the small blood vessels, and an exudation of small round cells, resembling lymphocytes. The motor cells in the anterior cornua tend to be destroyed. A study of the morbid anatomy suggests that the infection invades the cord by way of the arteries. In the brain, if the cortex is affected, the inflamed area is pink in colour, and is raised above the normal cortex. The nuclei in the neighbourhood of the fourth ventricle, and the basal ganglia are frequently involved in the inflammatory process. Microscopic examination reveals an extensive infiltration with small round cells, and a tendency to small haemorrhages, as in the cord. The affected area will probably be much more extensive than the symptoms would lead one to expect. There may be microscopic evidence of the pia mater being involved, but there is never meningitis in the crude sense. Harbitz and Scheele say that the peripheral nerves were not affected in any of their cases; but it is unlikely that any lesion of the peripheral nerves would be found in the cases examined, as cerebral cases seldom present any symptoms of peripheral neuritis. It is cases of the spinal type, which frequently suggest that a peripheral neuritis is present, and these cases are very rarely fatal in the acute stage.

As the symptoms vary according to the part affected, it is usual to divide the disease into types. This is convenient for purposes of references and description. The eight types are as follows:—

1. Spinal.
2. Cerebral.
3. Landry's paralysis.
4. Bulbar.
5. Cerebellar.
6. Meningitic.
7. Peripheral neuritis?
8. Abortive.

It should be understood that these types are not rigidly marked off from each other. For instance, the great majority of cases show what are usually regarded as meningitic symptoms. In others spinal symptoms predominate, and yet we have cerebral and meningitic symptoms as well. The classification given above is taken from Wickman's work, and is the one usually adopted.

I intend in this paper to describe certain of the common symptoms found in this disease, and to discuss their mode of production. First, tenderness of the muscles. Excruciating tenderness of the paralysed muscles is one of the most prominent symptoms of infantile paralysis. It is often so marked that a satisfactory examination of the child may be impracticable. As a rule no pain is complained of till the limb is actually touched. This symptom is generally found in spinal cases. It is not due to spasm or over-action on the part of the muscles affected. Although so often present, it may be entirely absent in a typical case from beginning to end. In cerebral cases, as already stated, it is

generally absent. These symptoms have often been ascribed to peripheral neuritis. Other explanations suggested are: Involvement of the nerve-roots in the meningitic process; and invasion of the tracts, conveying painful impulse in the spinal cord. Neither of these explanations is satisfactory. There is never any great degree of meningitis; at any rate, there is never enough to involve the nerve-roots to a serious extent. With regard to the second suggestion, there is no evidence that involvement of the spinal cord in an inflammatory process can produce pain. Moreover, the clinical features exactly resemble those of peripheral neuritis due to well-known causes such as alcohol, beri-beri, etc. The question would be decided by the examination of the nerves and cord in an acute case. I have had no experience of a purely neuritic form. In all my cases, the neuritic symptoms have been in addition to the spinal ones. In Case II., given below, the symptoms when first admitted were those of peripheral neuritis; that is, great pain and excessive tenderness in the trunk and limbs generally. The pain was so great that it was difficult to examine the patient; the knee-jerks were absent. The child was able to sit up, and could move his limbs at first. It was not until the boy had been in the hospital fourteen days that a definite paralysis of the trunk and legs set in. It must be assumed in this case that the nerves were involved first, producing the marked sensory symptoms, and that the spinal cord was invaded through the nerves. I think that it will be admitted that the probability of the peripheral nerves being involved, as well as the brain and cord, is very great.

It used to be taught that the paralysis was always flaccid in type. This undoubtedly may be the case; but partly flaccid and partly spastic paralysis is more usual and more characteristic. For instance, it is very common to get a flaccid paralysis in one limb, with absent knee-jerk and spasm of the muscles in the other leg, with exaggerated knee-jerk; or, in the same limb, some muscle may be in a state of spasm, while others are affected with a flaccid paralysis. The explanation is simple and entirely satisfactory. We have here the consequences of an incomplete transverse lesion of the cord. A study of the morbid anatomy shows that the disease is not limited to the anterior cornua, but involves the white matter of the lateral and anterior columns, though to a less extent. All this is so obvious that one wonders that it was not generally recognized earlier. The spasm of the muscles was no doubt regarded as the result of the great tenderness usually present. As might be expected, the greater opportunities which more recent writers have had of studying the disease have made them familiar with this symptom and its very simple and natural explanation. Accordingly, it is clearly and accurately described by Wickman, and its true explanation given. Other recent writers also give the same explanation, after insisting on the frequency of the symptom. This spasm is, as a rule, of brief duration, not lasting more than two or three weeks, or even less. It will be noted that Cases II. and III. both showed it. It is clear that, as the inflammatory trouble in the lateral columns of the cord clears

up, the spasm passes off. The explanation given by Hughlings Jackson is that the cerebellum exercises a continuous tonic influence on the muscles. When the lateral columns are injured, this tonic influence asserts itself, but, under normal conditions, it is kept in check by corresponding impulses from the cerebrum, which have a restraining effect.

The consideration of this symptom and its meaning naturally leads me to the third symptom I wish to discuss. Retraction of the head is one of the most striking and noticeable symptoms of infantile paralysis. It is exceedingly common. Almost every case presents it to a greater or lesser degree. It may be exceedingly well marked, so that the back of the head forms a right angle with the vertebral column. If it is severe the child will be unable to lie on its back, on account of the position of the head. Very often it is slight; to detect it then the physician should place the hand behind the head and endeavour to raise it. On endeavouring to raise the head, the rigidity of the muscles is brought into play. Associated with retraction of the head there may be well-marked opisthotonus. In the meningitic type, retraction of the head may be the only symptom, due to the infection of the nervous system. In this type, there may be no paralysis whatever, and the patient will recover completely after three or four weeks' illness, with fever. In the spinal and cerebral types it is almost invariably present, and should always be looked for, as it may be an important point in the diagnosis. On the other hand, in exceptional cases of the spinal type, it may be entirely wanting. The exact meaning of this symptom is still doubtful. It is of great interest to the physician, because of its frequency in early childhood. It is generally looked upon as a sign of meningitis, when it affects the posterior cerebral fossa. It is thought that, with the neck in that position, there is more room for any accumulation of fluid in the posterior fossa. This does not explain its occurrence in infantile paralysis and other diseases of early childhood. Before discussing its causation more fully, it would be well to consider in what diseases it occurs. In cerebro-spinal meningitis, it is the most prominent symptom, and I believe, is invariably present; in posterior basic meningitis it is again the most marked symptom. In tubercular meningitis it may be marked but is generally absent. In pneumococcal meningitis there is sometimes rigidity of the muscles of the neck, but marked retraction is not seen; as a rule there is no rigidity. In streptococcal meningitis it is generally absent. It is also present in other forms of meningitis which occur occasionally in infancy. Apart from meningitis, it is known to occur now and then in the pneumonia of childhood. The rigidity of the neck is usually found at the beginning of the illness, and often disappears when the chest trouble becomes obvious. It does not seem to add to the gravity of the prognosis. It is clearly not due to actual meningitis, as the prognosis is good, and pneumococci are never found on lumbar puncture, whereas they are readily found in cases of meningitis. Retraction of the neck is also an occasional symptom in severe cases of gastro-enteritis, in which a com-

plete recovery may take place. The condition is, in fact, so common in infancy and early childhood that the name *meningismus* has been given to it; this signifies a condition characterized by the symptoms of meningitis, without meningitis being present.

We may now consider the important question as to how head-retraction is produced. In infantile paralysis, as is seen in Cases I. and III., it may be associated with convulsions. It is often associated with rigidity of the legs, less often of the arms. We have therefore, in infantile paralysis, almost invariably rigidity of the neck, occasionally rigidity of the trunk and even opisthotonus less constantly, but still very frequently, rigidity of the legs; and least often rigidity of the arms. The lesion in infantile paralysis is a destructive one; in no way does it seem capable of setting up irritation. It follows, then, that these various symptoms must be due to some destructive lesion of the central nervous system. The real explanation we owe to the clinical insight of Hughlings Jackson, who regarded retraction of the neck as a sign of cerebellar paralysis. This hypothesis was first put forward by Hughlings Jackson in 1871, but seems to have been very generally overlooked till Victor Horsley called fresh attention to it in the Hughlings Jackson Lecture of 1907. My own interest in the subject was first aroused by a case of cerebellar tumour in the Children's Hospital. The child was two years of age, and was under observation for about six months. During the whole of this time there was very marked retraction of the head, with rigidity of the trunk and legs, and some rigidity of the arms at times. At the postmortem examination there was found a tumour at the base of the cerebellum, blocking the 4th ventricle and producing a secondary hydrocephalus. There was no meningitis. Hughlings Jackson published two similar cases in 1871. Bearing this case in mind, and noticing the frequency of head retraction in infantile paralysis, I was forced to the conclusion that Hughlings Jackson's hypothesis was correct. For fuller details of this theory, I must refer readers to Jackson's own papers. Putting it briefly, Jackson supposed that the cerebrum represents movements in the order, arm, leg, trunk, while the cerebellum represents them in the order, trunk, leg, arm; and in the cerebral movements flexion is dominant, in the cerebellar, extension. Each structure acts continuously on the lowest level, so that when the influence of one is removed the other is dominant. He thinks that epileptiform seizures are cerebral in origin; the corresponding cerebellar condition being tetanus-like seizures. To apply this theory to infantile paralysis, I suppose that the cortical structure or highest levels in both cerebrum and cerebellum are very apt to be affected by this disease; that the cerebral paralysis is manifested by the coma, and frequent tendency to convulsions, while the cerebellar paralysis is revealed by the retraction of the neck and rigidity of the limbs. Also that the order of the paralysis is the same as in cerebellar paralysis, the trunk preponderating. The cerebellar influence on the trunk is maximal, while the cerebral influence is minimal; hence, in a paralysis

of both, rigidity is dominant. This theory explains all the facts very simply. In ordinary hemiplegia, there is usually paralysis in the order arm, leg, trunk; rigidity, when present, is usually most marked in the arm, and then in the leg, never in the trunk. The cerebellar influx is most marked where the cerebral influence is normally dominant, viz., the arm, and is entirely absent where the cerebral influence is minimal, viz., the trunk, which is hardly affected in a cerebral paralysis.

I am convinced that this theory is correct. The only alternative theory is that the head retraction is due to meningeal irritation. This view is the one generally held, but does not explain all the facts of the case. In infantile paralysis we have a destructive disease of the central nervous system, and the different symptoms can only be explained in an adequate manner on the basis of Hughlings Jackson's hypothesis. There is no need to explain the symptom by the assumption of a meningitis which does not exist.

I append brief notes of three cases, illustrating some of the points under discussion.

Case I.—Alice L., age 1 11-12ths years. Admitted on March 24, 1909; discharged June 28, 1909. History: The child was taken ill suddenly, with general convulsions at 8 p.m., and was brought to the hospital immediately. The previous health had been good. On admission, the child was in general convulsions, with head retraction. The temperature was 104°. The convulsions continued with brief intervals for about twelve hours. Next day it was noticed that the child could not move the left arm and left leg. The muscles of these limbs were not tender. On the 28th, further convulsions occurred. Twitching was noticed in the left side of face, left arm and left leg. Two days later lumbar puncture was performed, and two ounces of clear fluid were drawn off. The child became quiet, and was not convulsed. On April 1 the patient was quite conscious, and lay motionless in bed. The left arm and left leg was paralysed. The knee-jerk was exaggerated. The child was subsequently discharged, suffering from left hemiplegia, but able to walk with assistance. It is probable that in this case the infection at first involved both the cerebellum as well as the two halves of the cerebrum, and that the left half of the cerebrum and the cerebellum quickly recovered, leaving a permanent lesion of the right cerebral hemisphere.

Case II.—Alfred P., age 4 years. Admitted March 8, 1909; discharged June 17, 1909. Two days before admission he was suddenly taken ill. The symptoms were vomiting, fever and marked restlessness, pain in the abdomen, legs and joints. On admission, the child was in general convulsions, and there was rigidity of the legs. It was very difficult to examine the patient on the 10th. There was great pain in the legs and neck, and the neck was very stiff. The painful parts were exceedingly tender on being palpitated. The knee-jerks were absent. On the 13th the child was very restless and complained of indefinite pains and tenderness in both legs. By the 22nd he had lost all power in both legs, and could not sit up. The knee-jerks were absent. There was

great tenderness in both lower limbs, rendering the examination difficult. The child did not complain of pain unless he was touched and examined. The boy improved slowly from this time onwards, and was discharged with paralysis in the left leg only. This case was exceptional in that definite paralysis did not occur till the child had been in hospital for a fortnight. Till then by far the most striking symptom was stiffness and pain in the neck. The severe pains in the limbs could only have been due to a peripheral neuritis.

Case III.—David P., age 6 years. Admitted May 4, 1914; discharged September 6, 1914. History: The patient had been ill for three days. He suddenly became feverish during the night of the 1st, and the following day could not move his left leg; the right leg was weak. He had had a convolution during the night before admission, and in the morning could not move the right leg. Since the beginning of the illness he had complained of pain in the neck. On admission there was complete paralysis of the legs, except for some movement in the toes of the right foot. The knee-jerks were absent. There was stiffness of the spine in the cervical region, and marked tenderness in both legs. Examination was very difficult on May 7. Pain was present in the elbows and left side. The child was not comatose, but drowsy and stuporous. Early in the morning of the 12th he became completely unconscious. Mild twitchings were noticed in the left side of the face and both arms. He kept rolling his head to and fro in a peculiar manner, quite regularly. The neck was rigid, the left arm was very rigid, and the right arm slightly so. The legs were flaccid. After this he gradually recovered consciousness, and very slowly improved. On discharge, the arms had completely recovered, but the legs were quite helpless. The interesting points about this case are the rigidity of the neck and arms, and the onset of coma about eleven days after the beginning of the illness.

Reports of Cases.

CONGENITAL HYPERTROPHIC STENOSIS.

By H. D. Lethbridge, M.B., M.S.,
Narandera, New South Wales.

Congenital hypertrophic stenosis of the pylorus in infants is sufficiently uncommon to justify the publication of single cases. The following case illustrates the usual failure of medical treatment, and the complete success of surgical intervention. It is advisable, nevertheless, to institute medical treatment for a short time, since there are cases which yield to gastric lavage, dieting and sedatives.

J.H., aged 2 months, was brought to me on June 8, 1914, on account of loss of flesh. The baby was healthy at birth, and, according to the mother's statement, above the average weight. When five weeks of age, vomiting set in. The vomiting was typical in character, the food would collect for about twelve hours, and would then be ejected forcibly. The motions were scanty and hard. The signs of obstruction at the pylorus were quite evident. The vomiting was unlike that seen in gastritis cases, and the absence of diarrhoea and green stools confirmed the diagnosis of pyloric stenosis.

Medical treatment, consisting of gastric lavage, whey, albumin water, etc., was tried, but, in spite of all endeavours, the baby became gradually worse during the twelve days following admission.

On June 20, 1914, the child was anaesthetized with ether, and I opened the abdomen. The stomach was found to be greatly hypertrophied. A ring of thickening about one-half of an inch in width was found at the pylorus. It felt like hard, fibrous tissue, and gave the appearance through the mucous membrane of being of a lighter colour than usual. I obtained the impression that spontaneous dilation could not occur. An opening was made into the stomach, about one inch from the ring. The pylorus was found to be so contracted that a lead pencil could only have been passed through it with great difficulty. The little finger would not pass through it. The stricture was dilated with a two-pronged dilator, and the stomach and abdomen were closed.

Nutrient enemas of glucose were given during the 24 hours following the operation, and feeding by mouth was started within two hours.

The baby vomited once, 36 hours after the operation. A moderately large quantity of food was brought up. Apart from this single attack of vomiting, the progress was rapid and uneventful.

At the time of the operation, the baby weighed eight pounds; three days later it weighed nine pounds, and on July 27, 1914, i.e., five weeks after the operation, the weight had increased to eleven pounds.

— PRE-NATAL CORNEAL OPACITIES.

By James M. Baxter, M.D. (Melb.),
Oculist, St. Vincent's Hospital, Melbourne.

The following case is one of great rarity, and for that reason I think it worth recording. A baby, aged 3 months was brought to me because of the condition of the eyes. Both corneas had dense opacities extending over the whole surface, except for a very narrow strip round the corneoscleral margin of both eyes. The opacity was very dense and of a bluish-white, shiny colour, and prevented any view of the iris or pupil behind. The mother stated that this condition was noticed at the time of birth, and that there was no inflammation or discharge. There was perception of light in both eyes. The patient was a well-developed baby, and appeared to be otherwise healthy. He was placed on mercury and chalk powder pending the result of the Wassermann reaction. The mother's blood serum was also tested; in both the result was negative. At the end of a month, the baby being then 4 months old, no change was noticed. Dr. Laurence saw the child for me, and applied radium. The mercury was continued. After the second application of the radium a very slight redness of the eyes was discernable. A few days later there was a slight clearing change. The treatment was continued, and the opacities gradually cleared up, until at the present time, after four months' treatment, the left cornea appears to the naked eye to be clear, while the right is almost clear.

One may ask: Did the radium have any influence? The child's improvement was coincident with its use, although the condition had remained stationary until the month preceding the application of the radium. That radium is of service in some cases of corneal opacity is undoubtedly. In cases that I have transferred to Dr. Laurence for treatment there has been marked improvement, as can be seen by referring to his book on radium. This case is one of pre-natal corneal opacities, whether developmental or as a result of some intra-uterine inflammation I know not. The condition is usually permanent, notwithstanding the fact that one observer expresses the reverse opinion.

— Reviews.

FOOD PRODUCTS.

In a book(1) recently published Dr. Bailey gives a concise account of the origin, composition, character, and uses of the various foods and materials employed in the preparation of foods. It is a mine of information in which not only the

medical practitioner, but also the public analyst can derive with profit. The foods are considered according to their sources. The processes of manufacture are briefly, but sufficiently, described. Their compositions and character are well delineated. The modes of preparation for the table are indicated, and the dietetic importance of the majority is discussed in detail sufficient for the needs of medical practitioners. The headings of some of the chapters may serve to give a general idea of the scope of this useful and cheap manual:—Cereals and the manufacture of starch; bread; sugar and other saccharine substances; roots, tubers and vegetables; the cultivation, preservation, and use of fruits and berries; fish and shellfish; milk and dairy products; eggs and egg products; spices and other condiments; and water and effervescent beverages. A number of illustrations add to the attractiveness of the volume.

During the last decade public interest has been aroused in the United States in an effort to obtain genuine foods. Much investigation into the nature of the manifold articles for human consumption has been undertaken to provide the housewife with a knowledge of what she buys. It cannot be doubted that this publicity has led to much improvement in the choice of materials in the cleanliness of manufacture and in the care of packing foods.

This volume should be on the bookshelf of every medical practitioner desirous of possessing information about the diet of our people.

— Notes on Books.

A UNIVERSITY JUBILEE PUBLICATION.

The Medical School of the University of Melbourne has celebrated its jubilee by publishing a handsome volume.¹ The matter and the illustrations are alike excellent, and are a fitting record of the interesting ceremony which took place on April 30, 1914, in the Wilson Hall. The book begins with a fine historical résumé of the life of the school since its inception on March 3, 1862, up to the year 1914. Records are apt to become dry and uninteresting when facts have to be marshalled in close succession, and when the number of persons playing a prominent part in a movement is large. But Sir Harry Allen, from whose pen this history emanates, has told his story in an unusually fascinating manner, and has avoided the drudgery of a mere chronology of facts with a consummate skill which must command admiration. The second part is devoted to the proceedings of the jubilee celebrations, beginning with the "jubilee dinner," that is not the menu of good things enjoyed, but the speeches delivered after their ingestion. Following this comes the account of the inaugural ceremony itself, with a number of chapters devoted to subjects connected with the Medical School. The majority of the speeches have been reported elsewhere, but their reproduction in the form of a memorial publication is not only fitting the occasion, but will be found to be highly useful as a reference to the development of the various departments of the Medical School. The final pages are devoted to an account of the clinical research fund, the University and Hospital demonstrations, the final convocation, and the roll of graduates. Interspersed throughout the volume are reproductions from photographs of some of the more prominent professors, teachers and members of the school.

Dr. Arthur Palmer (Board of Health, Sydney) wishes to tender his thanks to all those medical men who so courteously replied to his letter in connexion with a recent law case.

In the Western Maori district Dr. Maui Pomare has come out at the head of the poll as the only Government candidate at the recent New Zealand Parliamentary elections.

(1) The Source, Chemistry, and Use of Food Products. By E. H. S. Bailey, Ph.D., Philadelphia, 1914. P. Blakiston's Son and Co. Melbourne: Stirling and Co. Demi Svo, pp. 517, 75 illustrations. Price, 5s.

(1) University of Melbourne Medical School Jubilee, 1914. Melbourne: Ford & Son, Cr. Svo., pp. 108. Freely illustrated.

Medical Journal of Australia.

SATURDAY, JANUARY 2, 1915.

A Picturesque Ceremony.

In a new country, with brand new institutions, modern ideas of sociology, and young precepts untrammelled by traditions, anything approaching pageant appears to be singularly out of place. But the paradox is inevitable. A short time ago a skull of great and undoubted antiquity was unearthed in the Darling Downs and brought men to ponder on the great past of this young continent. In some of the administrative measures connected with health, we are at times tempted to enquire whether the responsible heads of the enlightened departments have not studied hygiene from the experience of the pleistocene age; and in spite of the fact that those phases of political and social progress which have taken other countries centuries to traverse, have been lightly passed over in a score of years until the present advanced condition of sociology has been reached, it is to be noted that old customs, established precedents and ancient formulae break through from time to time, and dispell the illusion that we are really different from the people in the old country.

A link with the past may be sought in the annual commemoration day of the Adelaide University, which was held on December 16, 1914, and delighted the people who were privileged to witness the scene. As will be gathered from the brief description which we publish elsewhere, all the usages of ancient Universities were respected and had recourse to. From the marshalling in of the senate and council in a prescribed order to the delightfully elegant speeches delivered by the Chancellor and His Excellency the Governor of South Australia, who is Visitor of the University, and the formal presentation of the recipients for degrees and the conferring of these degrees by the Chancellor on the recommendation of the Dean of the various Faculties; all conformed to old time practice, and helped to build up a picturesque and altogether delightful ceremony. That no oration was delivered in the Latin tongue may be regarded as a retrogression, or else as a sane limitation, for while these orations can scarcely be held

to lend to the dignity of the proceedings, since they are rarely understood by the majority of the undergraduates and perhaps of the graduates, and since they are not always examples of elegant literary style, they do not actually serve either an artistic or an academic purpose. The skillful account of the encaenia at the Oxford University, rendered this week by our London Correspondent, in spite of the happiness of expression, exemplifies this point.

It is a healthy sign of the present day in the Commonwealth that the men of learning in the Southern State should persist in so excellent an old time institution.

ECONOMY, EXTRAVAGANCE AND PATRIOTISM.

The cost of the war to the nation is necessarily extremely heavy. But whatever money is required to achieve success, and to lead the British arms to victory will be provided unstintingly by the peoples in the various parts of the British Empire. We have shown the world that a large and powerful army can be raised within the British Empire at short notice on the volunteer basis, and we have cause to be proud of our troops who of their own free will have expressed themselves as ready and anxious to serve their country and to safeguard the integrity and honour of the Empire, whose rule means freedom, justice and tolerance.

In the Commonwealth, the amount of unemployment due to the fact of war and to the results of the accompanying restriction of trade, although not yet of alarming proportions, is nevertheless growing in an uncomfortable manner. The majority of people who have means are wisely refraining from spending more than is necessary. Gifts of money and in kind are being made to render the lot of the soldier as little hard as possible; provision is being made for increased taxation which may hit the man of small means severely. The medical practitioner is agreeing to render more gratuitous service at home even than usual, and there is no doubt that the income of the profession will fall considerably short of the average. But no one will grumble, provided that Britain is served properly, and provided that the money spent in this manner does not filter through into the hands of persons whose greed and avarice lead them to gain at the country's ex-

pense. It is well known that the financial control, even in the Commonwealth of Australia, is not as careful as it might be. In the old country, it appears even more lax. We learn that the vast majority of the consultants and specialists in the Harley Street area are doing little or nothing at present, probably because the average citizen is less inclined to seek a "second opinion" and is content to have serious illness treated by his family doctor. This state of affairs will not be regarded as a ground for complaint, since the profession is prepared to take upon its shoulders its share of the country's burden. But a different story is told, when we learn that six specialists have been engaged by the Admiralty to serve the Naval hospitals at a salary of £5000 per annum each. Many of the men who have joined the various Territorial Hospitals and Ambulances are claiming their full army pay, and are draining without any need the purse of the nation in a service which they joined during peace as unpaid volunteers.

It is no business of ours to criticise any want of economy in other spheres of public or private life. But we regard it as our duty to call the attention of the medical profession to the necessity of exercising patriotism by sparing the country's funds and by refraining from turning the present crisis into a source of profit. We can all bear the pinch, if necessity arises, but not if we see some of our comrades fattening on the spoils.

THE SALE OF POISONS.

From the point of view of the legislator, it is necessary to impose restrictions on the sale of poisons, for the purpose of lessening the risk of an improper use. Apart from accidental poisoning due to mistaking bottles containing poisons for bottles containing beverages or medicines, it is necessary to safeguard against a too easy access to poisons which might be used for the purpose of suicide or murder, and also for the purpose of attempting to procure abortion. Legislative measures may suffice to prevent, or at all events to render infrequent, cases of accidental poisoning. These measures, however, need to be extremely stringent, for it is very difficult to protect people against folly, stupidity and carelessness, and no laws that human brain can evolve will cure some individuals of the bad habit of not thinking of what they are doing. Still less favourable are the prospects of success of measures aiming at the prevention of wilful suicide or murder. If a person desires to end his life, the mere difficulty of procuring prussic acid or chloro-

form will never result in an abandonment of the intention. It may result in a change of plan, in a substitution of a lethal agent, which is supposed to act in a pleasant manner, for one which causes pain or discomfort, or it may even lead to the choice of another method of putting an end to a miserable existence. In the case of murder by poisoning, the murderer is usually possessed of ingenuity worthy of a better cause. It would almost appear as if the difficulty of obtaining what he selects for destroying the life of another enhances the fascination of his deed. The study of any of the celebrated poisoning cases will show that, no matter what obstructions are placed in the way of the purchasing of deadly poisons like hyosine, aconitin, prussiate of potassium, etc., large quantities have been purchased without any suspicion having been awakened. In a similar manner, it is of little practical value to attempt to stop the sale of abortifacients, reputed or real, since the traffic is usually carried out by unscrupulous and wily persons, who trade on the fact that their victims will pay almost any price for secrecy. The restrictions placed on the sale of lead, diachylon, penny-royal, etc., have apparently not made any difference to this traffic. Nevertheless, it is essential that measures should be taken with the view of doing all that can be done to lessen these evils.

The Governor of Queensland has recently given his approval to a set of regulations under the Food and Drugs Act, 1908, which are to take effect on July 1, 1915. According to these regulations, the "immediate container" of any poison or poisonous mixture must bear the name of the poison, the word "poison," and the name and address of the seller printed conspicuously on it. The name and address of the seller need not be printed on the label of a patent medicine, proprietary medicine, insecticide, fungicide, vermin destroyer, weed destroyer, paint and pigment or of an original packet containing poisons sold by wholesale, and bearing the name of the manufacturer. Vendors are prohibited from selling certain poisons to persons under 18 years of age, or to any one who is unknown to the vendor, unless in the presence of a witness who is known to the vendor and to whom the purchaser is known. Provisions are made for the signature of the purchaser being entered in a "poisons' book," and when the purchaser is unknown to the vendor the signature must be witnessed or authenticated. Strong mineral acids, as well as liniments, embrocations, disinfectants, etc., containing scheduled poisons, may only be sold if contained in special bottles which can be distinguished readily by touch and sight from ordinary medicine bottles or bottles used for beverages. These bottles must bear a label to the effect that the contents must not be taken internally. Persons selling poisons must obtain a license from the Central Board of Health, but exceptions to this rule are made when the vendor is a medical practitioner or a pharmacist. The regulations do not apply to the sale of paints, pigments, photographic material or fly-papers. The maximum penalty for breaches of the regulations is £30.

It will be highly interesting to see how these regulations work in practice. For example, the provision that poisons shall not be sold to anyone who is not personally known to a vendor or who is accompanied by a third person known to both parties is a safeguard which, if properly carried out, should result in a perfect control of the poisons sold. On the other hand, the exemption of fly-papers may have the effect of rendering all these precautions nugatory. We admit that such stringent restrictions could scarcely be imposed on the sale of fly-papers. Further, it will be interesting to learn what the Central Board will do in regard to licensing persons under this section of the Act.

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THE NEW PHARMACOPÆIA.

We are authorized to state that the Ministers of Public Health of New South Wales and of Tasmania have approved of the suggestion made in regard to the date of the official recognition of the new edition of the Pharmacopœia (1914). In each case a period of grace of three or four months will be granted, before the Department exercises its right of initiating proceedings under the Public Health Acts in reference to the pharmacopœia. We are further informed that the matter will be laid before the Commissioner of Public Health in Queensland within a few days, and we hope that he will be disposed to grant a similar period of grace. In regard to Victoria, the Minister of Public Health considers it unnecessary to place us in a position to inform the medical profession throughout the State what they have to do in regard to prescribing after January 1, 1915. We trust that the pharmacists in Victoria have received more definite information, but in view of this non-committal attitude, we would advise practitioners in Victoria to mark all their prescriptions during the first three months of the current year: "To be dispensed in accordance with the British Pharmacopœia of 1898." Up to the time of going to press, we have not received any information from South Australia or Western Australia, but will, no doubt be in a position to make an announcement next week.

It is anticipated that copies of the new edition will be available in the Commonwealth in about 6 weeks' time. Until practitioners and pharmacists have a copy to refer to, it would be inconsistent to expect them to conform with the instructions or to prescribe or dispense new preparations. An excellent review of the changes has been published in the "British Medical Journal" and some of the more important of the changes, additions and omissions have also been dealt with in the "Medical Journal of Australia." It would, however, be unwise to write prescriptions and impossible to dispense medicines on the knowledge gained in this way. We hope that the Minister of Public Health in Victoria, will recognize the necessity of granting the period of grace before any prosecutions are instituted, and will make his intention known to the profession, even if he has to find another channel than the most obvious one, namely through the columns of the official organ of the Australian Branches of the British Medical Association.

ST. VINCENT'S FOUNDLING HOME.

The work of charity and utility undertaken by the Roman Catholic Church is so well known and so highly valued that no words are needed in justification of the latest movement in Western Australia. On December 13, 1914, at Subiae, His Excellency the Governor, formally opened the first Roman Catholic Foundling Home in the State in the presence of a large and distinguished gathering. Archbishop Clune took the chief part in the afternoon's ceremony, and lent colour to the undertaking by explaining the direction in which he proposed to extend the activity of the Church in the matter of the care of the young. The State usually undertakes the duty of looking after the young, the infirm, and the old. Modern progress has added to this list the incapacitated. In the case of Western Australia, children and old persons are being provided for, but the very young are being somewhat left out in the cold. Under the care of the Sisters of Mercy, this work will now be carried out as well, as thoroughly, and as promptly as it would be done under State management. It is a work of genuine charity, and one in which the mass of the charitably disposed can assist; for as the Archbishop pointed out, a certain amount of money is still required to meet the expenses of the erection and equipment. The home had cost about £6000. It had been begun before the war, and he had not felt justified in checking its progress as it neared completion on this account. He therefore made an appeal for funds to wipe off a debt which had been incurred. In response to this appeal he was in the fortunate position of being able to announce that £1000 had been received almost immediately after the opening ceremony.

Destitute children will be received into the new Home, and will be cared for and taught until they reach the age for attending school. The institution has been built by the Roman Catholic Church, and will be placed under the care of Roman Catholic Sisters, but it will be open to children of any or no confession, and its beneficial influence will not be restricted to the children of Roman Catholic parents. More than that, the Archbishop has given an assurance that the religious beliefs of the parents or guardians of the inmates will be respected, and in this manner the St. Vincent's Foundling Home may be regarded as non-denominational. The home is a fine building, and its equipment is eminently suited to its functions. From the point of view of the health of the community, these institutions, in which the very young are taken care of, are of great importance. It may, no doubt, be easier to control the methods employed and to ensure that modern views of improving the health of the young are followed when the State undertakes the task of financing the homes. But the experience of the past in regard to the charitable efforts of the Roman Catholic Church has been so happy and so reassuring that no fear need be expressed but that the little ones of Western Australia will be well looked after, and given that chance which is so often wanting to turn them into strong, useful members of society, possessed of healthy bodies and minds.

Abstracts from Current Medical Literature.

SURGERY.

(1) Malignant Tumours of Long Bones.

James Berry (Clinical Journal, Nos. 30 and 31, 1914) discusses his experience of malignant disease affecting long bones, extending over a period of 30 years. He points out the frequent association of secondary deposits of carcinoma with spontaneous fracture, and cites a case in which what appeared to be an ordinary fracture of the humerus was really caused by a carcinomatous nodule secondary to a large malignant ulcer of the oesophagus, which had not given rise to any symptoms. The importance is emphasized of making a clinical diagnosis between periosteal and endosteal sarcomata, because of the terrible malignancy of the former. This is generally not very difficult in advanced cases, but in the earlier stages exploratory incision and microscopical examination are necessary. The prominence of the tumour, its hardness and fixity, and the abruptness of its edge, which never overhangs as in the case of an exostosis, suggest malignancy. A good X-ray photograph showing detail will often clear away all doubt. Endosteal sarcomata may occasionally be very malignant. The presence of cartilaginous, bony or other innocent connective tissue in a tumour does not imply lessened malignancy. The surgeon should be quite sure of the diagnosis before amputation is carried out, for there are numerous conditions which simulate sarcoma. Of these mention is made of quiet necrosis of bone, and more particularly of tuberculous osteitis. In another case, a large, irregular, firm tumour on the inner side of the thigh proved to be a non-pulsating popliteal aneurysm. Simple cystic disease of bone and an unsuspected fracture without displacement, but with some formation of callus, and with swelling of the soft parts, may prove sources of error. Berry quotes Butten-Coley's statistics to show that many cases of sarcomata at the ends of long bones are frequently mistaken for disease of the neighbouring joint, so that the patient is treated for chronic synovitis. Sarcoma of the trochanter may simulate hip joint disease, though the hip joint can usually be rotated with more freedom than in the latter condition. Throughout the paper the importance of a good skiagram is emphasized. The prognosis is stated to be much worse in cases of periosteal than of endosteal sarcoma; in the former disease recurrences in distant organs occur usually in less than two years. In one exceptional case recurrence did not occur for six years, and in another the patient was alive and well 33 years after the operation. The author is inclined to the opinion that treatment with Coley's fluid is at times of value.

(2) Experimental Operations on the Orifices of the Heart.

Alexis Carrel (Annals of Surgery, July, 1914) describes operations on dogs upon the pulmonary and aortic orifices of the heart, performed without danger to the animal. The Melzer-Auer method was employed in anaesthetizing the animals; the pericardium was opened and the heart exposed. The pedicle of the heart was clamped with a large soft-jawed forceps after the blood had been well oxygenated. It was found to be possible to clamp the pedicle in this manner for $\frac{1}{2}$ to 3 minutes without subsequent trouble. The aortic and pulmonary orifices were exposed by incisions made through the anterior wall at the level of or a little above, the heart junction. The incision was made by scissors with unequal blades, to allow of perforation of the wall before cutting. The opening of the ventricles or the arteries is always followed by the entrance of air into the heart. This proved dangerous in the aorta and left ventricle, as air emboli entered the coronary vessels. The air was therefore aspirated by means of a large cannula connected with a vacuum apparatus. Several operations were performed, such as cauterizing the aortic valves, enlarging the pulmonary orifice by means of a patch of vein preserved in cold storage, and suture of the pulmonary valves. The purpose of the operations, which were quite successful, was to show how extensive an operation could be performed upon the heart without endangering the life of the animal.

(3) Shell Wounds in Naval Warfare.

Bryan Peck, R. A. Rankin, and J. Lambert give an account of the experience gained at the Royal Naval Sick Quarters at Shotley (Lancet, Oct. 24, 1914). The wounded from the Königin Luise and from the various ships which had been in action off Heligoland were found to be suffering from the effects of common or lyddite shells. The shells were made of forged or cast steel. The common shells were filled with gunpowder, while the lyddite shells were filled with lyddite of which picric acid is the chief constituent. Some of the German shells were filled with tri-nitro-toluene. In many cases 36 hours had elapsed before admission. The shell on exploding bursts into pieces of various sizes. Large pieces invariably cause death. The wounds in the survivors were caused by pieces measuring not more than 3 inches by 1 inch. In some cases there was a complete loss of superficial tissue. In others the entrance and exit wounds were quite small, or the entrance wound small and the exit wound large. In other cases again, the fragment had caused an entrance but no exit wound. In addition to pieces of shell, portions of serge, linen, cork, and wood were found in the wound. Comminuted and splintered fractures of bone, lacerations of muscles, nerves and soft tissues, and injuries to internal organs were met with. Shock was present in almost every case. The

authors state that no primary haemorrhage occurred at the time when the wounded were admitted. In a few instances, secondary haemorrhage was seen. Suppuration occurred in practically every case, and was due to dirt, oil, coal, and cordite on the skin. The treatment was conservative as far as possible. The patient was usually anaesthetized, the wound cleaned and swabbed with iodine, and foreign bodies removed. Drainage was usually necessary. Peroxide of hydrogen was freely used, as were streptococcal and staphylococcal vaccines. The details of a few cases are appended.

(4) Cancer of the Breast.

In 1908, Rodman described a special method of operating for mammary cancer. Donald Guthrie has used this method in a series of 117 operations, and reports on his experience (Journ. American Med. Association, Oct. 10, 1914). The essential points of Rodman's operations are as follows: (1) The axilla is cleared out before the breast is removed. The reason for this is the avoidance of expressing cancer cells from the breast into the axillary region. At the same time this procedure is useful in diminishing the amount of haemorrhage, and in preventing shock due to the long exposure of the large chest wound. The incision is a straight one, beginning one inch below the clavicle, two fingers' breadth from and parallel to the sulcus between the deltoid and the larger pectoral muscle. Since this incision does not extend on the arm, the patients retain full use of the arm after operation. The dissection is undertaken from above downward and from within outwards. The acromial, long and alar thoracic, and subscapular branches of the axillary artery, with their accompanying veins are cut and ligatured. The contents of the axilla should be removed en masse, as a gland-bearing fascia. The breast is removed by an incision beginning at the middle of the primary incision, embracing the gland and extending downwards to a point midway between the ensiform cartilage and the umbilicus. The incision should not come within two inches of the edge of the growth. The author does not follow Rodman's advice of making a separate exploration in the supra clavicular region. He regards cases in which there is involvement of the supra clavicular glands as inoperable on account of the certainty that internal metastases have occurred. He closes the wound at its clavicular end, and in those cases in which the flaps cannot be approximated, the central third of the second incision is covered by Thiersch's grafts taken from the thigh. He does not employ drainage, save when there has been an undue amount of trauma, or in fleshy persons. The arms are released 24 hours after the operation, and passive movement and massage are begun early. He is very satisfied with the results obtained.

(5) Myositis.

John B. Murphy ("Journ. American Med. Association," Oct. 10, 1914) dis-

cusses the various forms of myositis, including the ischaemic, infiltration and compression forms, affecting the flexor muscles of the wrist. The paralysis and contracted condition, known as Volkmann's contracture, is always a sequence of cicatricial contraction following myositis. The latter may be due to compression, infiltration or acute oedema or haemorrhage. In these cases, the drop wrist is of nervous origin. The extensors are rarely involved. He is of opinion that prophylactic treatment should be resorted to immediately the syndrome of pain, swelling, and cyanosis is manifest. This treatment yields excellent results. Tenoplasty is described in some detail as an ideal operation for fully developed cases, and the author illustrates the methods of elongating tendons in the treatment of the condition by means of diagrams, photographs and clinical accounts of cases. He calls attention to the fact that in certain cases, capsulotomy should be resorted to. When tenoplasty cannot be carried out, it is admissible to resect portions of the bones. He is of opinion that the operative treatment should be undertaken as soon as the acute symptoms have fully subsided. It is essential to undertake the correction of any mal-union before tenoplasty is carried out.

GYNAECOLOGY AND OBSTETRICS.

(6) Diagnostic Aphorisms.

Giles ("Canada Lancet," October, 1914) states that a diagnosis based on symptoms alone and unsupported by an examination of physical signs contravenes the fundamental principles of medicinal ethics. He proceeds to lay down the principles of diagnosis in the more important gynaecological conditions and diseases: (1) Pregnancy. This condition can never be excluded on a priori grounds of spinsterhood, separation, social position, or the alleged previous removal of organs, etc. It is unsafe for a practitioner to state, on the ground of the condition of a woman's pelvic organs, that she cannot become pregnant unless he has removed her uterus, tubes and ovaries, and even then it is wiser to say that it is improbable. There is only one infallible sign of pregnancy, viz., the beating of the foetal heart. (2) Tumours: Generally a tumour with missed monthly periods is pregnancy; a tumour with unaltered menstruation is non-uterine; and a tumour with increased menstruation is a fibroid. A large tumour in a thin woman is probably ovarian, and in a fat woman, a fibroid. A fixed tumour at or past the menopause suggests malignancy; in a young woman an inflammatory mass or an inflamed tumour. A pelvic tumour can often be removed by a catheter or enema. Irregular tumours in young women usually suggesting fibroids turn out to be abscesses in the tubes. It is not wise to assume that there is a tumour only on one side of the uterus, merely because one cannot be felt on the other. With an adnexal tumour the temperature is an indifferent guide; it

may be normal with suppuration and raised with ectopic gestation. (3) Uterine Cancer: Bleeding after the menopause must be regarded as cancer until the contrary is proved. Usually cancer of the vaginal cervix is found in parous women, and cancer of the body in nulliparæ. Treatment of uterine haemorrhage at or near the menopause without examination closely resembles manslaughter. The scantier the hemorrhage the greater the urgency. Hardness of the cervix is not a sign of malignancy; friability is; wasting and offensive watery discharge means that the disease is far advanced. (4) Extra-uterine Pregnancy.—Amenorrhœa followed by brown discharge should make the practitioner thoughtful, as should a history of early miscarriage and no foetus passed. Amenorrhœa followed by median pains and free loss suggest abortion, but if followed by lateral pain and scanty loss, extra-uterine pregnancy. (5) Menopause: Menopause should be no more critical than puberty, but both epochs are liable to be associated with some functional disturbance. Increase in the frequency or amount of loss is due to disease. Infrequency or diminution may be functional or due to approaching menopause. Haemorrhage when profuse at or near the menopause always calls for a thorough examination. (6) Symptomatic Disorders: Dysmenorrhœa and menorrhagia are only symptoms and not disease. Dyspareunia, when primary, is due to stenosis, or vaginismus, when secondary to tubo-ovarian disease. When haemorrhage occurs after coitus in later life look out for caruncle, polypus, or cancer. Primary sterility, with dysmenorrhœa is probably due to stenosis or anteflexion. If associated with leucorrhœa salpingitis always examine the husband if no physical signs can be found in a sterile wife. Never call a woman neurotic when you do not know the condition of her pelvic organs, and lastly always remember that there is no sign or symptom that may not be fallacious, and that the most experienced judgement is fallible.

(7) The Use and Abuse of Forceps.

Watson (The Canada Lancet, August, 1914) discusses the subject of the use and abuse of obstetric forceps at some length. He strongly urges that the forceps are an instrument to be used in the second stage of labour, and have no place at all in the first. There must always be full dilatation of the cervix. When forceps are applied to the head through an undilated cervix, and traction exerted, the margins of the cervix tend to contract. The pull is therefore exerted not only on the child's head, but also on the uterus. Before the cervix gives way a very considerable strain may have been put on the fascia of the pelvis, which later manifests itself in uterine displacements. If circumstances demand rapid delivery before the cervix is fully dilated then this must be brought about by manual dilatation, or by in-

cisions according to Dührssen's procedure. Even in the second stage he considers that the judicious use of pituitary extract can diminish the number of forceps applications. On the other hand he admits that a timely application of the forceps in the second stage when the head moulding is complete saves the mother much suffering. In moderately contracted pelvis he advises waiting until the head has engaged and head moulding has taken place before applying forceps. He comments strongly on the seriousness of applying forceps under any circumstances while the head is freely moveable above the brim. If after a careful examination under an anaesthetic by the Müller-Kerr method, there is found to be much overlapping of head over the brim of the pelvis, recourse must be had to one of the major operative procedures, Cæsarean section, pubiotomy or craniotomy. Should there be a possibility of spontaneous delivery occurring the second stage must be allowed to continue. There should be no time limit put on this stage, but the general condition of the mother, the state of the lower uterine segment, and the foetal heart should determine its duration. The high application of forceps should be performed rarely, and only after all other means have failed to secure delivery. He considers version more fatal to the foetus than the high forceps operation. In all border line cases in which a difficult and prolonged labour is likely to occur, he considers the patient should be removed to a well-equipped hospital, where the practitioner's hand will not be forced by the well-meaning but unwise friends, where he can conduct every manipulation with the strictest asepsis, and where he has facilities for performing instantly any one of the major operations mentioned.

(8) Prophylaxis of Uterine Cancer.

Smith ("Md. M.J." 1914, lvii., 69) calls attention to the appalling prevalence of uterine cancer. Haemorrhage, leucorrhœa and pain, especially in women between 35 and 60 years, furnish sufficient reason for a careful physical examination, followed, if necessary, by microscopic examination. He mentions an interesting point in connexion with cancerous nodules of the cervix, namely, that the mucous membrane which overlies them is not only congested, but is apparently glued to the structures beneath, and does not glide readily over them as in normal and benign conditions. He believes this analogous to the retraction and dimpling of the skin in cancer of the breast. He believes, with Bossi, that the proper treatment of cervical lacerations, endocervicitis, and endometritis would prevent many cases of cancer, and he urges as a prophylaxis against uterine cancer the systematic and persevering surgical treatment of all benign affections of the cervix and uterine cavity.

Contract Practice

XI.

The Lodge Question in Queensland.

A quarter of a century ago contract practice was effected in Queensland through the intermediation of a number of Friendly Societies which employed medical officers at a capitation fee of 20s. As a result of a succession of bad years, leading to a considerable degree of financial depression, this fee was reduced to 15s. In 1890 the Medico-Ethical Society endeavoured to force the hands of the Societies to restore the remuneration to its original level. The Society failed in its object, chiefly because the essential work of organization had been neglected, and the necessary unanimity did not exist among the members of the profession in the State. The British Medical Association was fairly representative of the medical profession in Queensland about this time, but the medico-political work undertaken was almost a negligible quantity. In 1894 there were 243 Friendly Society Lodges attached to 15 distinct Friendly Societies. The total number of benefit members was 15,677. In December, 1912, there were 519 lodges and 47,204 benefit members.

As has already been pointed out (No. VII., November 28, 1914), a Society called the Brisbane United Friendly Societies' Institute, was formed in 1890, and offered to the members of the medical profession terms which were regarded as derogatory to the profession. The medical officers received only about two-fifths of the contributions of members to the medical benefit funds, and less than two-fifths when the member's income exceeded £500 per annum. There was no income limit, and no limitation to the number of persons on the lists of any one medical officer. The payment worked out at considerably less than 15s., which had previously been fixed by the Branch as a minimum capitation fee.

The position appeared to have been equally bad in the country districts. In Toowoomba four doctors had held the positions of medical officers to the Lodges for a considerable time without any difficulties arising. They had been paid 25s. and 30s. per annum to include medicines, but not medicine bottles; the midwifery fee was £2 2s., and fees for operations were extra. About 1897 the Brisbane United Friendly Societies' Institute held a conference with representatives of the Lodges, and succeeded in persuading the latter to adopt the same terms as those offered in Brisbane. Some of the Lodges gave notice to their doctors that the fees would be reduced to the level which was being paid in Brisbane, or even lower, and intimated their intention of securing the services of the medical man who would accept the lowest rate. As a bait, it was held out that private practice would be allowed within a radius of five miles. The medical practitioners of the district determined that the capitation fee should not be less than 20s., and should not include medicines, unless an extra 5s. were paid. The minimum midwifery fee should be £2 2s. Unfortunately a medical practitioner was found who was willing to accept the position on the terms offered by the Friendly Societies' Institute. In spite of remonstrance, he, his successor, and a third man who followed, refused to fall into line, and up to the year 1902 this condition of affairs was maintained. It appears that in this year the medical officers of the Lodges were attending approximately 1,072 members (which would represent about 4,300 individuals) for the meagre sum of £804 a year. There does not appear to have been any written agreement between the Lodges and the medical officers. The medical officers were required to perform operations without any extra fees.

In regard to Townsville and Rockhampton, the Lodges, or at all events some of them, were paying the full 15s. claimed by the Branch for Lodge work. The positions were held by members of the Association, and with the approval of the Branch. On the other hand, considerable abuse existed in regard to the financial position of some of the members. We are informed that persons possessed of £20,000, and others with incomes varying between £2,000

and £3,000 a year were included among members of Lodges, and were receiving medical benefit.

In view of this abuse, and of the low rate of remuneration, the Council of the Queensland Branch supported one or two Lodge doctors in their efforts to substitute for the unsatisfactory arrangements the New South Wales Common Form of Agreement. These sporadic efforts, however, did not materially alter the condition of affairs up to the year 1910. The only general action in regard to Lodge practice undertaken by the Branch between 1900 and 1910 was the persistent refusal to recognize the Australian Natives' Association and the Brisbane United Friendly Societies' Institute.

In April, 1910, it was decided at a meeting of the Branch Council that a model Lodge Agreement should be drawn up, and that this agreement should form the basis of all contract practice appointments of members of the Branch to the Lodges. In January, 1911, the Secretary of the Branch approached all the medical practitioners in the State with the view of obtaining suggestions for a model agreement. The New South Wales form was used as a basis. A sub-committee was appointed to consider the replies received, and as a result of the report of this sub-committee, a special meeting was held on July 19, 1912, at which the whole question was discussed. The President of the New South Wales Branch attended this meeting, and also a second meeting convened for the same purpose, and assisted the Branch with advice based on the experience in New South Wales. It was determined (1) that there should be an income limit of £208 a year for persons joining and of £312 a year during the currency of membership, (2) that the agreement should not be retrospective, and (3) that no scale of fees should be inserted into the Common Form of Agreement, but that the fees for each town or district should be fixed by the Local Medical Association, if any, or in the absence of such an association, by the medical men in the town or district, and that the fees thus fixed should only become effective or binding after ratification by the Council. A conference was held between an equal number of delegates of the Queensland Branch of the British Medical Association and of delegates of the Queensland United Friendly Societies' Institution, at which the draft agreement, which had been accepted by the Branch, was presented for discussion. The terms of this agreement were approved, and the Friendly Societies agreed to their general adoption. The Branch Council thereupon took steps to introduce the Common Form of Agreement in October, 1914. Early in August it was recognized that the time for the initiation of the agreement was inappropriate on account of the financial depression likely to be caused by the war. A meeting was therefore summoned for August 11, 1914, and at a meeting of the Council it was resolved:—

"That the model agreement as adopted stand, except that in view of the conditions caused by the war, the Queensland Branch of the British Medical Association decides that no present increase in previously existing fees for Lodge patients be asked for."

The position at present is, therefore, quite clear, and well defined. All members of the Branch are required to insist on the adoption of the Common Form of Agreement in regard to all appointments to Lodges, but the increase of remuneration is held in suspension, and will not be enforced until normal conditions are restored. The Manchester Unity of the Independent Order of Oddfellows was not a party to the conference between the Friendly Societies and the Branch, and a certain misunderstanding arose, partly on this account, and partly because the intention of the Branch was misconstrued. Attempts are being made to include the M.U.O.O.F. in the list of Friendly Societies which have recognized the Common Form of Agreement, but under no circumstances will the Branch or any of its members go back on the resolution referred to. Members of Friendly Societies have had sufficient experience in the past to know that they will never receive unfair or oppressive treatment at the hands of their medical officers, and that in time of need the medical profession is always willing to lend assistance, even when this involves considerable personal sacrifice.

British Medical Association News.

SCIENTIFIC.

A meeting of the Tasmanian Branch was held on December 8, 1914, at the Royal Society's Rooms, Hobart, the President (Dr. Hogg) in the chair.

At the termination of discussion on medico-political matters, Dr. Terence Butler read a paper on "Pneumonia," based on the experience gained in his own and his father's practices, and descriptive of the methods adopted in the treatment of the patients. A discussion followed, in which a number of the members present took part. We hope to publish this paper in a future issue.

MEDICO-POLITICAL.

A meeting of the Tasmanian Branch was held on December 8, 1914, at the Royal Society's Rooms, Hobart, Dr. Hogg (the President) in the chair.

A sub-Committee was appointed for the purpose of enquiring into the question of the proposed tax on motor-car tyres, and of recommending a course of action. The following were appointed to act on the sub-Committee: Drs. Sprott, Clarke and Sprent.

Dr. G. M. Anderson (Franklin) raised the question of the fees payable to medical witnesses. He stated that he had been in correspondence with country practitioners, and, as a result of the replies received, had drawn up the following scale, which he believed would receive the support of the majority of the medical practitioners in Tasmania.

For loss of time	£1 1s.	per half-day
For giving evidence	£1 1s.	
For making a report	£1 1s.	
For making a post-mortem examination	£2 2s.	
For giving information to the Coroner in lieu of evidence in Court	£1 1s.	

Mileage should be calculated at the rate of 2s. 6d. per mile traversed on the outward journey.

The following motion referring to this matter was put to the meeting and carried:—

"That the matter be referred to the Council to arrange a deputation to wait upon the Attorney-General in respect thereto."

ANNUAL MEETING.

The Annual Meeting of the Queensland Branch was held in the B.M.A. Rooms, Brisbane, on December 11, 1914, Dr. Brockway (the Acting President) in the chair.

Dr. Brockway moved from the chair:—

That the rules of the Branch be altered to allow of the appointment of one or more honorary Vice-Presidents selected from country members.

The motion was carried.

Dr. Culpin moved, on behalf of Dr. Culpin, jun., the following:—

That this Association is of the opinion that the Private Hospitals Act urgently requires amendment in clauses relating to puerperal fever, and that the Commissioner of Public Health be respectfully requested to give the matter serious consideration from the standpoint of the health to the community.

Dr. Robertson seconded the motion. A discussion followed, in the course of which Drs. Love, Culpin, Taylor, Gibson and Spark spoke.

Dr. Love thereupon moved the following amendment, which was seconded by Dr. Culpin:—

That the motion be referred to the Council, with power to act.

The amendment was carried.

Dr. Kerr Scott moved, and Dr. Carvooso seconded:—

That, in the opinion of the Branch, the display of the Red Cross in vehicles driven by or conveying medical practitioners is advisable; and that steps be instituted to obtain permission and recognition of the traffic authorities.

A discussion followed, in which Drs. Love, Hopkins, Taylor and Weedon took part. Whereupon Dr. Gibson moved and Dr. Weedon seconded the following amendment:

That the words "Provided that the cross is exhibited only when bent on medical work" be added.

The motion, as amended, was carried by 9 votes to 8.

Dr. Brockway (the Acting President), delivered an Address, which has been published in the "Medical Journal of Australia," December 26, 1914, p. 605.

The Report of the Council for the year was read and adopted.

The Treasurer's Financial Statement and Balance Sheet was presented and adopted.

As reported in last week's issue, the list of the office-bearers for the ensuing year was read. The President thanked the members for having elected him to his office.

BRITISH MEDICAL ASSOCIATION (AUSTRALIA) MILITARY MOTOR AMBULANCE FUND.

During the week ending December 29, 1914, the sum of £132 8s. has been received in subscriptions by the Honorary Secretary of the Federal Committee. The total up to date is £1,204.

	£ s. d.
Dr. Amess, J., Melbourne, Vic.	1 2 0
" Ashley, T. E., Byron Bay, N.S.W.	1 1 0
" Barrow, I. M., Sydney	0 10 6
" Belli, R., Casino, N.S.W.	1 1 6
" Bendigo and Northern District Division (Vic.)	12 1 6
B.M.A.	1 1 0
" Bligh, E. A. R., North Sydney	1 1 0
" Brown, Edgar, Adelaide	1 0 0
" Brydon, A. J., Queensland	1 1 0
" Buckley, E. W., Tamworth, N.S.W.	1 1 0
" Binnie, E. H., Sydney	1 1 0
" Cameron, M. A., E. Brisbane, Q.	2 2 0
" Chapple, Phœbe, Adelaide	1 1 0
" Clemons, G., Launceston	5 0 0
" Colquhoun, A. G. H., Yass, N.S.W.	1 0 0
" " Sydney	2 2 0
" Dawson, J., Walgett, N.S.W.	1 1 0
" de Crespiigny, C. T., Adelaide	1 1 0
" Deane, J. P., Victoria	1 1 0
" Ebsworth, R. H., Echuca, Vic.	2 3 0
" Esler, A. W., Williamstown, Vic.	0 10 6
" Evans, J. H., Hindmarsh, S.A.	1 1 6
" Formby, H. H., Strathalbyn, S.A.	2 2 6
" Forsyth, R. D., Melbourne	1 1 0
" Foster, Bryan, Horsham, Vic.	1 1 0
" Giblin, W. E., Papua	2 2 0
" Harris, W. E., Armidale, N.S.W.	1 1 0
" Harrow, R. E., Adelaide	1 1 0
" Heggaton, R. D., Murrumburrah, N.S.W.	1 1 0
" Horgan, J. B., Yarrawonga, Vic.	1 2 0
" Hooper, W. Dunbar, Melbourne, Vic.	5 5 0
" Howden, R., Victoria	1 1 0
" Humphrey, E. M., Hornsby, N.S.W.	1 1 0
" Johnson, C. H., Kerang, Vic.	1 2 0
" Jolley, Alan F., South Yarra, Vic.	1 1 0
" Junk, David, Wondai, Q.	1 1 0
" Lane, Raymond, Sydney	1 1 0
" Love, Wilton, Brisbane	5 5 0
" Mackenzie, A. C., Mount Morgan, Q.	1 1 0
" Macknight, C., Urana, N.S.W.	1 1 0
" Mackenzie, J. F., Clifton Hill, Vic.	2 2 0
" Marshall, J., Bega, N.S.W.	0 11 0
" Maxwell, C., Frankston, Vic.	1 1 0
" McGowan, A. G., Ballarat, Vic.	1 2 0
" McKenna, J., Shepparton, Vic.	1 1 0
" McPherson, J., Bulli, N.S.W.	1 1 6
" Morris, L., Gympie, Q.	1 1 0
" Morton, D. M., Melbourne	1 1 0
" Neumann, E., Manildra, N.S.W.	1 1 0
" Niesche, F. W., Adelaide	1 1 0
" Officer, D. M., Melbourne	1 2 0
" Pacey, F. S., Drysdale, Victoria	1 1 0
" Player, Charles R., Malvern, Vic.	1 1 0
" Plummer, Violet, Adelaide	1 1 0
" Pope, Roland J., Sydney	26 5 0
" Russell, R. H., Melbourne	5 0 0
" Scott, T. W., Terang, Vic.	2 2 0

" Shaw, H. C., Brisbane	..	..	..	..	..	1	1	0
" Silberberg, M. D., Melbourne	..	..	..	..	..	1	2	0
" Smeal, J. A., Melbourne, Vic.	..	..	..	..	..	1	0	0
" Smith, Julian, Melbourne, Vic.	..	..	..	..	..	3	3	0
" South, H., Boonah, Q.	..	..	..	..	..	2	2	0
" Sproxle, W., Cronulla, N.S.W.	..	..	..	..	..	1	1	0
" Strong, R. H., Melbourne	..	..	..	..	..	1	1	0
" Suckling, F. M., Neutral Bay, N.S.W.	..	..	..	..	..	1	0	0
" Summers, E. M., Coombungee, Q.	..	..	..	..	..	1	1	0
" Thelander, C. A., Brisbane	..	..	..	..	..	2	2	0
" Thornton, F. H., Georgetown, N.Q.	..	..	..	..	..	0	11	0
" Tilley, W. J., Warwick, Q.	..	..	..	..	..	1	1	0
" Trood, C., Windsor, Vic.	..	..	..	..	..	1	1	0
" Tucker, Cecil F., Brighton, Vic.	..	..	..	..	..	1	1	0
" Weihen, A. W., Sydney	..	..	..	..	..	0	10	6
" White, A. E. R., Melbourne	..	..	..	..	..	2	2	0

Medical Societies.

(Affiliated with the British Medical Association).

CENTRAL WESTERN MEDICAL ASSOCIATION.

A general meeting of the Central Western Medical Association was held on December 3, 1914, at the School of Arts, Parramatta, Dr. E. Cuthbert Hall (the President) in the chair.

Some letters from the Hon. Secretary of the New South Wales Branch of the British Medical Association were read, viz., (1) re the G.U.O.O.F. and a proposal in regard to attendance upon "medical members," and (2) re Friendly Society Lodges which meet at places at which no medical practitioner resides.

Arising out of this correspondence, it was resolved that the procedure proposed by the Grand Secretary of the G.U.O.O.F. be agreed to, provided (as per Common Form of Agreement), (1) That the member be a bona fide resident; (2) that the member produce a certificate from the Secretary of the Lodge from which he is being transferred; and (3) that the name of the member be not removable from the list of the medical officer until the end of the quarter.

The following resolution was carried unanimously:—

That no member of this Association shall act as medical officer of any Friendly Society Lodge employing a medical man ineligible for membership of the British Medical Association.

Public Health.

SMALL-POX IN SYDNEY.

The number of small-pox cases reported to the Department of Public Health, during the week ended December 27, 1914, was:—

City of Sydney and Metropolitan District 2

THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received during the fortnight ending December 21, 1914, by the Department of Public Health, New South Wales:—

	Enteric Scarlet Fever.	Diphtheria.	Infantile Paralysis.	
	Cs. D'ths.	Cs. D'ths.	Cs. D'ths.	Cs.
Metrop. Com. Dis. 38	* .. 74	* .. 67	* .. —	
H'n'r R. Com. Dis. 16	1 .. 10	— .. 5	— .. —	
Rem'der of State 59	7 .. 27	— .. 136	2 .. 1	
Total	113	8 .. 111	— .. 208	2 .. 1

* Deaths for the Metropolitan district are not available.

It will be noted that the incidence of and mortality from enteric fever are high, both being above those registered in the fortnight ending December 7, 1914. The incidence is higher than that registered in the fortnight ending December 22, 1913, while the mortality in that period was 9. On the other hand, the number of cases in Broken Hill was 6, as compared with 12 in the preceding fortnight. Seven cases were notified from Tamworth. In regard to

the distribution of diphtheria, 19 cases occurred in Broken Hill, 12 in Braidwood, 8 in Murwillumbah, and 5 in each Goulburn and Moama.

HEALTH OF THE METROPOLIS OF SYDNEY.

The mortality returns for the month of November, 1914, as supplied by the Government Statistician, shows that 533 deaths occurred in the Metropolis of Sydney, including 31 deaths of individuals previously resident outside the Metropolis, and deaths classified as taking place in the Islands and shipping in the Harbour.

Calculated on an estimated population of 725,400, the death-rate for the month is equivalent to an annual death-rate of 8.82 per 1000 of population.

Deducting the deaths of persons non-resident of the Metropolis in the Mental Hospitals of Leichhardt and Hunter's Hill (Callan Park and Gladesville), and adding the deaths of persons resident of the Metropolis occurring at the Benevolent Asylums, Mental Hospitals and Consumptive Sanatoria situated outside the Metropolis, the number of deaths was 576, which is equal to a corrected death-rate of 9.52 per 1000.

Among children under one year of age, 107 deaths were recorded for the Metropolis.

There were 1,676 births during the month. This works out at 27.72 per 1000 of the population, and may be regarded as satisfactory, although it is slightly lower than the average for the previous five years.

The infantile mortality rate was 64 per 1000 births, the drop in the rate is noteworthy, being 31% below the average for November of the previous five years.

Infectious diseases were responsible for 10 deaths, of which 3 were due to enteric fever, 2 to scarlet fever, and 5 to diphtheria.

Diarrhoeal diseases were credited with 52 deaths, phthisis caused 27 deaths, cancer 48, Bright's disease 34, and accident 27.

Compared with the average in November for the previous five years, there were increases in the number of deaths from haemorrhage of the brain, etc., and pulmonary diseases, with decreases in epidemic diseases, diarrhoea, and enteritis and phthisis.

183 cases of scarlet fever, 114 cases of diphtheria, 31 of enteric fever, and 1 of anterior polio-myelitis were notified during the month of November. These figures show an increase on those of the previous month of 5 in the case of scarlet fever, 13 in the case of diphtheria, and 2 in the case of typhoid fever.

Fourteen cases of phthisis (pulmonary and laryngeal tuberculosis) were notified under the by-laws of the City Council, and 15 premises were disinfected by the Council's trained staff after the deaths or the removal of the patients.

F. M. SUCKLING,
Acting Medical Officer of Health.
December 18, 1914.

THE HEALTH OF HOBART, TASMANIA.

Alderman Meagher delivered a valedictory address on December 7, 1914, at the last meeting of the Hobart City Council, before vacating his office of Mayor. In dealing with matters connected with health, he sketched the progress of the work in connexion with the sewage scheme. The survey, which was now proceeding, would be complete in February, 1915, and the contouring work would then be begun. At present, there was a main sewer system extending for about 2654 lineal feet, and over 100 connexions had been made. In regard to the supply of water, much difficulty had been experienced both this summer and last in obtaining a sufficient supply of water. Certain measures had been adopted, which he hoped would lead to a better state of affairs. The construction of the Ridgeway Reservoir had been delayed by the fact that the contracting firm had gone into liquidation. Litigation had been instituted, in which the corporation had been successful. The Council had decided to complete the reservoir by day labour, and the work was now proceeding.

In respect to the health conditions of the city, he pointed out that, with the exception of the prevalence of diphtheria, the city of Hobart had reason to be satisfied. Enteric fever had been reduced to an infrequent disease by the institu-

tion of deep drainage, while the incidence of tuberculosis was being lessened through notification. This measure enabled the health authorities to cope with the danger of spread by carrying out disinfection and by controlling the sources of infection. The new hospital at Vaucluse was not yet ready for the reception of patients, but he hoped that the work would soon be completed. In spite of the unsuitability of the old building, the results obtained therein were very satisfactory. After reviewing the position in regard to other diseases of an infective nature, he remarked that the regulations of the Food and Drugs Act were being rigidly enforced, and the sanitary provisions of the city and in all the public buildings had been much improved. A reform in the method of slaughtering of cattle for food purposes would have to be considered in the near future.

The unsatisfactory condition of affairs in regard to diphtheria, referred to in the Mayor's speech, is explained more fully by the City Health Medical Officer, who reported that 14 patients suffering from this disease had been admitted to the Vaucluse Hospital. Three of these patients had died. It appears that a few cases have occurred in the country districts, but, from the figures published, it would seem that the authorities would not have a very difficult task to perform. A strict control of school children, and early application of anti-toxin, should suffice to bring the epidemic to a close.

Vital Statistics.

NEW SOUTH WALES.

The Government Statistician of New South Wales has issued his annual report for the year 1913. The volume comprises some 144 pages, and contains a large amount of valuable information. The figures presented, inasmuch as they have not been compiled for the purpose of proving any special theory and opinion, are valuable for many purposes, and may be taken as indisputable evidence of the incidence of various conditions, and of the variations in population and habits.

In the first place, the population, as such, is dealt with. The State is said to contain 1,832,456 persons, and the increase during the past twelve years amounts to no less than 456,257. The annual increase in percentages has varied during this period from 0.85 to 4.72, and was 3.01 for 1913. The marriage rate per 1000 of population has mounted from 7.77 in the period 1870-74 to 9.58 in 1912, and 9.01 in 1913. Compared with other countries, this rate is very high. Roumania and Hungary each had a marriage rate of 8.6, and Prussia one of 8.0 in 1912. England and Wales had a rate of 7.8, while in Ireland the rate was only 5.3. Under five persons in every 1000 persons married made a mark as signature. In 1870, the illiteracy rate was 18.23%. In regard to the age of brides, we are told that out of 16,311, 659 were under 18 years of age, and 176 over 50. The average worked out at 25.6 years. This average is slightly higher than in 1904. The average age of bridegrooms was 28.85, which is slightly lower than previous years. Only 14 were under 18 years of age, while 446 were over 50.

The birth-rate in 1913 was 28.81. A table showing the rates from 1870 onwards reveals the fact that, starting with a birth-rate of 39.36, it declined steadily up to 1904, when it reached 26.99. From that time onwards, it has varied considerably, having reached 29.90 in 1912. Only Western Australia and Tasmania, of the States in Australia, showed a higher birth-rate from 1908 to 1912, but in 1913 Victoria alone had a lower rate than New South Wales. In Prussia the birth-rate in 1912 was approximately the same as in New South Wales; in Roumania it was 43.4 (as compared with 29.9); in Hungary it was 36.3; in England and Wales it was 23.8; in Ireland 23.0, and in France 19.0. The urban and rural rates were almost equal in New South Wales in 1913. One hundred and four males were born to every 100 female children. Turning to the illegitimacy rate, the Government Statistician tells us that the proportion of illegitimate to total births is no index of the relative frequency of these births, since the proportion of legitimate births to the total population has decreased largely. He therefore presents the condition of affairs by stating the

number of illegitimate births to each 1000 unmarried women in the different age groups. These figures reveal a marked decrease, in spite of the fact that the actual number has increased to an extent of 5.37% of the total number of births. Collecting these figures into one age group of from 15 to 44, the figures were 18.41 in 1891, 16.10 in 1901, and 14.18 in 1911.

The natural increase of the population, i.e., the excess of births over deaths, was 32,402. The increase per cent. of population at the end of the previous year rose from 1.64 in 1904 to 1.95 in 1912, and fell again to 1.82 in 1913. The rate of natural increase is low as compared with that of twenty years ago, but it is only exceeded by one country outside Australasia, namely, Roumania. Among the lowest rates, England and Wales stands at 10.5 per 1000 of population, Switzerland at 8.3, Belgium at 6.5, Ireland at 6.5, France at 1.5, and Ceylon at 0.

During the year 1913, 19,732 deaths were registered in New South Wales. Of these, 11,509 affected males and 8,223 females. The death-rate was therefore 10.91 per 1000 of population. In the period 1870-74, the average annual death-rate was 13.93, in the period 1875-79 it rose to 16.67, and since that time it has decreased steadily to the present level. The decrease has, however, not been quite regular in regard to males, the lowest point having been reached in 1910, when it stood at 11.13; while in regard to females, the rise after 1910 has been so slight as to be practically negligible. Compared with other countries, Australia, as a whole, stands extremely well. The highest death-rate in Australasia in 1913 was recorded in Victoria (11.11), New South Wales had the second highest, while the two lowest rates were in New Zealand (9.47) and Western Australia (9.35). The highest rate recorded in 1912 was 23.3 in Hungary; in France it was 17.5; in England and Wales it was 13.3; and in Denmark it was 13.0. An analysis of the New South Wales figures reveals the fact that the metropolitan rate was but little higher than the country rate, being 11.18 as compared with 10.73. In the period 1880-84, the difference was marked, the figures being 20.60 and 13.21, while in the period 1905-09, it was very small, the figures being 10.53 and 10.21.

In order to obtain a true basis for comparison of the death-rates, the Statistician has set up a table of what is termed the index of mortality. This is calculated on the assumption that the population of each State contains the same proportion at each of the five age-groups as the population of the Commonwealth at the time of the census of 1911. The index of mortality of the capital cities has also been calculated. The results of these computations are set out in the following table:—

State.	Index of mort- ality.	Crude Death- rate.	City.	Index of mort- ality.	Crude Death- rate.
N.S.W. ..	10.82 ..	10.91 ..	Sydney ..	11.02 ..	11.18 ..
Victoria ..	11.53 ..	11.11 ..	Melbourne ..	11.78 ..	12.44 ..
Queensland ..	10.61 ..	10.39 ..	Brisbane ..	12.66 ..	13.12 ..
S. Aust. ..	10.32 ..	10.82 ..	Adelaide ..	12.85 ..	14.03 ..
W. Aust. ..	10.16 ..	9.35 ..	Perth (not available)		
Tasmania ..	10.84 ..	10.87 ..	Hobart ..	14.42 ..	16.69 ..

The infantile mortality for the year 1913 was satisfactorily low, although it was higher than the rates registered since 1907. The number of infants under one year of age dying in New South Wales during the year was 4,084, which gives a rate of 78.3 per 1000 births. In the period 1880-84 it was 120.4. The lowest rate recorded in the State was 69.5 in 1911. The death-rate was the same for the metropolitan as for the country areas. The lowest Australasian rate was recorded in New Zealand (59.2), while in New South Wales it was the highest. In other countries the infantile death-rate was less favourable, with the single exception of France, where it was 78 in 1912. The highest rate in that year was 215 in Ceylon, while Hungary, Austria, Prussia, Ontario, Finland, all had a rate of over 100, and England and Wales and Denmark had rates of over 90. In New South Wales the rate among legitimate children was 73.6, and among illegitimate it was 161.0. The latter rate has decreased during the last five years, while the general infantile death-rate has increased. Similarly, the mortality among children up to the age of five years has

increased from 21.16, which was the average of the period 1907-11, to 23.73 among the legitimate children, and decreased from 51.92 to 44.08 among the illegitimate.

The analysis of the causes of death shows that organic diseases of the heart were the most frequent, having been registered on 1,727 occasions. Next in frequency comes diarrhoea and enteritis (1,636), while cancer was responsible for 1,322 deaths, pulmonary tuberculosis for 1,205, senility for 1,162, accident for 1,062, and pneumonia for 1,031.

Enteric fever was recorded as a cause of death 291 times. Seventy of these deaths occurred in the metropolis, which is equal to a rate of 0.99 per 1000; while 236 took place in the country districts, which is equal to a rate of 1.51. The rate in the period 1894-98 was 2.26 and 3.24 in the metropolis and country districts respectively.

One death was recorded during the year from variola; 1,070 cases were notified during the year. From the year 1883 up to 1913, no case of small-pox was notified in the State. The type of the epidemic in Sydney during the year 1913 was very mild. It is stated that about 425,000 persons were vaccinated by the Government Medical Officers, and by private practitioners, but no mention is made of the proportion of successful vaccinations, nor are any figures given relative to the source of the lymph and its potency.

Morbilli caused 51 deaths, scarlatina 23, pertussis 344, and diphtheria 310. The mortality of scarlatina was 1.4% of the notified cases, of diphtheria 4.1 and of enteric fever 10.0%. Influenza is stated to have caused 110 deaths.

Tuberculosis continues to attract a marked degree of attention. Apart from the 1,210 deaths due to pulmonary disease, there were 234 deaths due to other forms of tuberculosis. The decrease in the death-rate from this disease is ascribed to the operation of the Dairies' Supervision Act, 1886, the Diseased Animals and Meat Act, 1892, and the Public Health Act, 1896. In the period 1894-98, the phthisis death-rate per 10,000 of population was 8.15. Since that period it has declined until 1913, when it was 6.69. The phthisis death-rate was 17 in Ireland in 1912, 14.9 in Jamaica, 12 in Spain, 11 in the Netherlands, 10.7 in Italy, and 10.4 in England and Wales. In the Commonwealth it was highest in Victoria in the same year (8.3), and lowest in Queensland (5.3), while in New Zealand it was only 5.

Deaths occurring in connexion with childbirth are divided into five classes, viz., accidents of pregnancy, puerperal haemorrhage, puerperal septicæmia, albuminuria and eclampsia, and "other casualties of childbirth." In 1913, 329 deaths were attributed to one of these causes. There were 138 cases of puerperal septicæmia, 63 of albuminuria and eclampsia, 33 of haemorrhage, and 27 of accidents of pregnancy.

In regard to the causes of death to infants and children under five years of age, a full analysis has been made. Diarrhoea and enteritis caused 23.3 deaths per 1000 births during the first year of life, premature birth 17.8, infantile debility 11.7, broncho-pneumonia 2.8, bronchitis 2.1, convulsions 2.3, and syphilis 0.6. Pertussis killed 4.5 children in every thousand born. The deaths of children under five years of age are calculated per 1000 living. The frequency of the various causes corresponds more or less to that affecting infants. Information as to the causes of death among the illegitimate infants reveals the fact that 58.5 per thousand births were due to diarrhoea, 26.8 to "debility," 26.8 to premature birth, 5 to convulsions, 5 to broncho-pneumonia, and 4.6 to syphilis. The Statistician recognizes in these figures evidence of a more frequent neglect of these unfortunate children than is present in the case of children born in wedlock.

A very large amount of other important and interesting information is given in the report. The report can be obtained from the Government Printer, and its price is 5s.

Hospitals.

PERTH PUBLIC HOSPITAL.

At a meeting of the Perth Public Hospital, held on December 4, 1914, it was resolved that the position of Junior Resident Medical Officer shall in future be open to graduates of either sex. The Government is to be asked to erect

an additional wing to the Women's Department of the Hospital, in order to relieve the overcrowding of the wards. The Board is taking steps to institute a properly equipped X-ray department.

CHILDREN'S HOSPITAL, PERTH.

The fifth annual meeting of the subscribers to the Children's Hospital, Perth, was held on November 16, 1914. The annual report, with the Treasurer's report and balance sheet, were presented and adopted. During the year ended September 30, 1914, 1238 children had been treated within the hospital wards, while a large number had received outpatient attendance. The Board state that there was cause for congratulation at the accomplishment of another year's useful work.

The financial condition of the Hospital was not satisfactory. The gross receipts amounted to £11,401, and the gross expenditure to £11,891. This sum included an expenditure of £1500 on the "Old Englyshe Fayre," the profits of which amounted to £3,600. Including the amounts written off for depreciation, the total loss on the year's working worked out at £1898. The public had subscribed considerably more than the Government, the subsidy working out at about 6s. 8d. in the £. In regard to the cost of buildings during the past five years, the public had contributed £14,000, and the Government £7000. On the other hand, the Government had come to the Hospital's assistance in regard to the immediate financial needs.

During the first week of December, Mr. T. Coome, a resident of the city, has presented some freehold land unconditionally to the hospital, thus relieving the Board of its anxiety to a considerable extent. Mr. Coome has suggested to the Board that the land might be cut up into a number of blocks, on which small settlements may be erected, and in this way a little township might be formed. The area is about 8,700 acres, and its value is estimated at about £3,500. It is situated 3½ miles from Quindanning township, and 24 miles from Williams township.

THE THOMAS WALKER CONVALESCENT HOME, PARRAMATTA RIVER.

The Visiting Medical Officers and the Matron of the Thomas Walker Convalescent Hospital, Parramatta, New South Wales, have issued their twenty-first annual report. In a memorandum by the Committee of Management, it is stated that, during the 21 years since the institution has been opened, 18,899 convalescent patients have been received into the home. These patients were all non-paying guests. Twenty-one deaths have occurred, which is at the rate of one each year. During the year ending September 30, 1914, 1061 patients were received, being 745 from 40 hospitals and 316 from the patients' homes. No case of variola occurred at the home during the year, but there was one case of varicella. One death, caused by cerebral haemorrhage, occurred.

The tabular statement of affections from which the patients were convalescent shows the class of case admitted. The use of the term "cured," signifying the condition on discharge of patients who had recovered from illnesses treated in other institutions and sent to the home during convalescence, is a little unfortunate. Indeed, the fact of recovery, relief, or absence of relief from symptoms is comparatively immaterial, insofar as the utility of the home is concerned. There were 131 persons convalescing from zymotic diseases, 15 from diseases of bones and joints, 40 from diseases of the urinary system, 168 from diseases of the respiratory system, 121 from diseases of the generative system, 263 from diseases of the digestive system, 99 from diseases of the circulatory system, 5 from diseases of the special senses, 89 from diseases of the nervous system, 86 from constitutional diseases, 64 from miscellaneous diseases, and 49 from injuries.

VIVISECTION REGULATIONS.

In accordance with the provisions of the Prevention of Cruelty to Animals Act, 1912 (Western Australia), the Governor in Executive Council has issued the following regulations restricting the practice of employing animals for the purpose of scientific research. The regulations are prefaced by a general statement referring to the Act and the powers of the Governor to make regulations.

1. Any person desiring to obtain authority from the Governor to perform vivisection or any other experiment on any animal shall make written application to the Attorney-General according to Form 1 in the Schedule hereto.

2. The application shall be submitted to the Principal Medical Officer, who shall report thereon to the Attorney-General, and the application and report shall be submitted to the Governor.

3. If the Governor approves the application, he may grant to the applicant an authority in the terms of the application, subject to any conditions or restrictions which may be deemed expedient.

4. An authority under these Regulations shall be according to Form 2 in the Schedule, and may be general or may be limited to any particular experiment or experiments.

5. Any authority granted hereunder may be withdrawn by the Governor at any time and for any reason or without any reason being assigned.

6. A register of the persons having authority under these Regulations shall be kept by the Under Secretary for Law.

7. Every operation conducted by any authorized person shall be performed with a minimum of suffering to the animal operated upon.

8. No operation involving the possible infliction of suffering shall be performed unless such experiment is likely to be of scientific value.

9. The animal subject to the operation shall, during the whole time thereof, be so under the influence of some anaesthetic as to be insensible to pain.

10. When the animal has, in the course of such operation, been so injured that its recovery would involve serious suffering, it shall be destroyed while still insensible.

11. An animal which has suffered one operation shall not be subjected to another.

12. Where by feeding or inoculation any animal shall have been infected with disease and such disease is likely to prove painful, the animal shall be destroyed at the earliest possible moment consistent with the completion of observations for which the test was designed.

13. Any animal which is to be destroyed at the termination of any experiment shall be destroyed in the most rapid and humane manner applicable to that animal; unless some specific method of destruction is necessary for the purpose of the experiment, in which case the animal shall be previously anaesthetized or otherwise rendered insensible, if the manner of death is likely to be prolonged or painful.

14. No operation shall be carried out upon any animal within the sight or hearing of any other animal, unless the nature of the experiment renders the presence of another animal reasonably unavoidable, or unless both animals have been previously anaesthetized.

15. These Regulations may be cited as the Vivisection Regulations, 1914.

Naval and Military News.

MOTOR AMBULANCES.

We have been informed that, up to the present, the Medical Service of the Australian Military Forces has received gifts of 31 motor ambulances and five motor cycles. The following is a list of the donors. It is stated that 14 of the ambulances have been sent to the front already, and that others will be despatched at an early date.

Mrs. James Russell	2	Hobart Collection	2
Mr. Barr Smith	2	Sir S. McCaughey	2
Brisbane Courier Fund	2	John B. Cooke & Co.	1
Mrs. G. Landale	1	Mr. and Miss Turnbull	1
Mr. G. F. Syme	1	Lady Golfers of Victoria	1
Messrs. Eyes and Crowle	1	Public Service, Victoria	1
Retail Chemists of Victoria	1	City of Hawthorn	1
City of Melbourne	1	Mr. S. P. Mackay	1
City of Camberwell	1	City of Collingwood	1
City of Kew	1	V.R.C.	1
Brisbane Red Cross Assn.	1	Mr. W. Booth	1
Leather Merchants of Vic.	3	Mrs. W. Smith	1

Motor Cycles.

International Correspondence School, Sydney	2	Dr. Miller Johnson and friends	1
Anonymous	1	Mr. Austin	1

ALLOTMENT OF MEDICAL OFFICER TO TRAINING AREAS.

Captain H. J. F. Norria, of the 2nd District, 5th Brigade, has been appointed to the North Sydney area, 18a; Captain W. Vickers, of the 2nd District, 8th Brigade, has been appointed to the Forest Lodge area, 29b; and Captain W. K. Inglis, of the 2nd District, 9th Brigade, has been appointed to the Enmore area, 34a.

Special Correspondence.

(From Our London Correspondent.)

LONDON LETTER.

Encænia at Oxford.

The Encænia at Oxford was honoured this year by the presence of her Royal Highness the Duchess of Albany. Convocation was opened at twelve o'clock on June 24th by the Vice-Chancellor, and the following recipients of honorary degrees were ushered in by the bedelles and introduced in a Latin speech by the Public Orator to the Vice-Chancellor:—

For Degree of D.C.L.

His Royal Highness the Duke of Saxe-Coburg and Gotha, K.G.

His Excellency the American Ambassador, Mr. Walter Hines Page.

For Degree of D.Litt.

The Right Honourable Viscount Bryce, O.M., D.C.L., Honorary Fellow of Oriel and Trinity Colleges, late His Majesty's Ambassador to the United States.

Geheimrat Dr. Ludwig Mitteis, Professor of Law in the University of Leipzig.

For Degree of D.Mus.

Dr. Richard Strauss.

Thereafter, Mr. Godley delivered the Creweian Oration, in the course of which, after paying due tribute to the memory of Nathaniel Crewe, he said that he could not refrain from deplored the course of events, "que neque laudari possunt neque prateriri." The passage of the Parliament Act, and subsequent political transactions, had brought Ireland to the verge to civil war: the country's only hope lay in rulers, if such could be even now found, "qui patriam partibus ante ferre possent." In England "Furia quædam" were burning houses and churches: if imprisoned, they were ordered by Mrs. Pankhurst to obtain liberation by refusing food: "Furiarum maxima juxta accubat, manibus prohibet contingere mensas." Observing that in the midst of a crisis the University and the country had lost one of their wisest counsellors, the speaker eulogised the many-sided usefulness and shining qualities of Sir William Anson, that model of a good servant of Oxford and the State. A new Vice-Chancellor, "nomine et ingenio validus," had succeeded "laudando laudandus," to the Principal of Brasenose, whose "suavitatis et constantia" in office would long be remembered. On a brief survey of the academic legislation of the past year, it seemed that the time occupied was more considerable than the results obtained. Proposed changes in the constitution of the Hebdomadal Council had been defeated by habitual advocates of change, and the Responsions Statute, thought by some to facilitate the return of Astraea, had failed to please the University. There was a rumor of legislation conferring degrees on women: much good might it do them! Undergraduates—"usque adeo nil mortalibus ardui est"—were conducting co-operative stores; it was to be hoped that they would be more prudent in selling than some of their friends had occasionally been in buying. On the whole, the academic year had been quiet. It was to be hoped that a like tranquility might be restored to the country, and that the name of Ireland might not be associated with dire calamity at home, as recently off the coast of Canada. The Orator concluded by congratulating the University on the continued residence of the Prince of Wales. The Prince had shared fully in its life, and whenever he left it he would carry with him its warmest wishes. It was enough, for Oxford, to have been allowed in some degree

to assist in educating the Prince for the high duties of sovereignty.

Owing to the recent death of the Warden, the recipients of the honorary degrees were not entertained at the usual luncheon at All Souls' College; the Duchess of Albany and her son taking lunch with the Vice-Chancellor at Christ Church, and Dr. Strauss lunching at New College with Professor Sir Walter Parratt, Dr. H. P. Allen, and other leading members of the Music Faculty. The other newly-created doctors were entertained at other Colleges.

Epsom College.

Speech Day at Epsom College was celebrated this year on Saturday, July 25th, and was specially noticeable because the Rev. T. N. H. Smith-Pearse, who has been Headmaster of the College for twenty-five years and is about to retire, chose this occasion to bid farewell to the institution with which he has been so long and closely associated, and for which he has done so much.

After service in the chapel, the large number of visitors and relatives of the boys who were present adjourned to the big school-room for the doubly enjoyable purpose of seeing the prizes distributed and of hearing an address from Lord Rosebery, the President of the College.

In the course of a few opening remarks, the Headmaster extended a hearty welcome to everyone present. He thought they would all agree with him that the list of honours gained by the school during the year was a long and creditable one. A few days previously he took the trouble to find out how many honours had been gained by the school during the time he could remember, and found that in 25 years the school had won 53 open scholarships at Oxford or Cambridge, and four admissions to Woolwich. As so many of the boys entered the medical profession, it was fair to add those who won scholarships at the hospitals after passing the first medical examination, and he found that they numbered 140, so that the average number of honours per year was just about eight for a school of something under 300. It was rather hard for him that day to avoid speaking in some way of himself, though he very much disliked doing it, but, as they knew, he was leaving now, and he was doing so because he thought it was much better to leave the ship to be managed by younger hands when it was going full steam ahead, and not wait until the engines began to creak and groan, and the master went to sleep on the bridge. He had also reached that age when assistant masters were expected to retire, and therefore he thought headmasters should set the example. He was also feeling, and he thought his wife was, the strain of many years there, and he was looking forward to a time of less responsibility and freedom from the care of a school like that. He had seen the numbers grow from just under 200 to just under 300, and he had seen very large buildings erected there from time to time, which, he hoped, had made the school well equipped. When he came there the school was largely composed of galvanized iron; now he might say it was composed of good honest brick and stone. He wished he could have seen the chapel completed. The Council had opened a fund for that purpose, but the fund had not grown with the rapidity he should have liked. The chapel sadly needed completion, and he hoped that would be the next work undertaken there. He formed the conviction when he came there, and he adhered to it most strongly, that if the school was to be as prosperous and successful as it might be, they must see their way to remove the system of voting for foundations. It only remained for him to say how grateful he felt to Almighty God for giving him health and strength to do the work, to all with whom he had been associated, to the Council for their constant courtesy and kindness, to his colleagues who had helped so enormously, to all who had charge of the domestic arrangements, above all to the boys, who had always behaved well and supported him loyally, and last, but not least, might he say how much he owed, and how much they all owed, to his devoted wife.

The prizes were then distributed by Lord Rosebery, who afterwards addressed the boys on "Character," which he defined as "the sum of the moral qualities of a man." He proceeded to say that he believed they were all born with character, and that some germ of character was an innate possession of everybody. He did not know whether that went counter to theological dogma, but he was firmly persuaded of what he had stated, and he thought he had

noticed that the way the baby took a bottle was a very fine indication of character. The world was constantly carving and chiselling on their characters. Not a day passed but had some influence on their character—carving and chiselling some woods which were so soft that they never repaid the trouble, nor were worth anything, and carving and chiselling some woods which split so easily that they were not worth anything either. But there were also some of the finer woods, like old mahogany, which got richer and nobler the older they got. Why he was saying this was because he firmly believed that the years they spent in school were far more important in the formation of character than all the many years they might spend afterwards. The moments at school were the supreme moments, the moments which decided for them whether they were going to be men in the highest sense of the word, or whether they were going to pass through life as atoms. Well, they would say this: "But character is so subtle and impalpable a thing that it requires years to find out what the character of a man really consists of." He said as against that, that there was one way, and one certain way only, by which the character of a man best showed itself, and that was by his manners. Of course, that was not an infallible way. He had known many execrable people who, through shyness, had the most execrable manners, and who, if they were to be judged by them, would instantly be dragged to the block without the benefit of clergy. On the other hand, he had known scoundrels with the most charming and fascinating manners possible, given to them by nature for much the same purpose as the web was given to the spider. But those were not the manners he meant. He meant those simple, manly manners, that were an index to a manly, straightforward character. He remembered the lines of Tennyson, very often quoted: "Manners are not idle, but the fruit of loyal nature, and of noble mind." Those lines were emphatically true, and he would like them to be the motto of all the boys at Epsom College.

Many of them were destined for the noble profession of medicine, and he did not know of any calling in which manners were of such importance as in that profession. All who had been attended by a doctor must know the difference between the doctor who entered the room with a gloomy and austere expression—enough to take the heart out of the most courageous patient—and with all the appearance of mortality condensed in his countenance, and who gave on the wish to leave life rather than have any further experience with it—the difference between that doctor and the doctor who instinctively seemed to spread a sunny atmosphere throughout the room the moment he opened the door, and gave them a feeling of hope and encouragement, which seemed to reconcile them to life. If the first kind of doctor was the best in the world, and the second kind of doctor was only third-rate, he would a thousand times rather have a third-rate doctor with his genial manners than he would have the first-rate doctor with his repulsive manners—except for an occasional consultation.

In conclusion, Lord Rosebery said: "Make your manners worthy of your character, and your character worthy of your manners. The two processes go hand in hand. You can form for yourself a noble character that should express itself in noble manners, the manners of a man who, respecting himself, respects others as well; and, if you have noble manners, you will not have them, I think, without a noble character."

A hearty vote of thanks to Lord Rosebery, proposed by Sir Henry Morris, and seconded by Sir William Church, was carried with acclamation.

The remainder of the afternoon was spent in visiting the College and the beautiful grounds, where tea was served in a large marquee and at tables under the trees.

Commemoration Day at Glasgow University.

In his capacity as Chancellor of Glasgow University, Lord Rosebery presided on June 23rd in the Bute Hall, on the occasion of Commemoration Day.

Honorary degrees were conferred on a number of men distinguished in various walks of public, civil, and professional life, after which an oration on Lord Lister was delivered by Sir Hector Cameron, Emeritus Professor of Clinical Surgery. In the course of his address, the orator said that so anxious had the University been to honour

Lord Lister, once a professor within her walls, that as long ago as 1903 the court had contemplated commemorating on such an occasion as the present the great work which he had accomplished. Recalling the appointment of Lister to Glasgow University in 1860, Sir Hector observed that surgery was then not only a limited but an uncertain and disappointing art. The introduction of anaesthesia by ether and chloroform some time previously had initiated great changes, but uncertain as the healing of wounds had always been, the uncertainty and disappointment which dogged the footsteps of the surgeon became increasingly greater as the scope of surgery extended. Lister had given a scientific basis to surgery, and the uncertainty in which the greatest surgeons had left it up to that time was swept away by him. There was one characteristic which Sir Hector Cameron said he believed to have been the chief mainspring of all the great surgeon's extraordinary industry and perseverance in the work which he had set himself to accomplish, that was a passionate desire to lessen the sum of human misery. He had left to the world a priceless heritage, and to his profession an inspiring example.

Lord Rosebery, who expressed thanks to the orator, said one item had been left to him which would no doubt form a gratifying announcement. It was that the managers of the Royal Infirmary had agreed to present to the University the structure of Lord Lister's ward and lecture-room, in which the principles of antiseptic surgery were first expounded and exemplified, in order that they might be re-erected in the University grounds as a permanent memorial to the great surgeon. It was quite impossible, Lord Rosebery continued, for a layman to add anything to what Sir Hector Cameron had so well said. Indeed, in regard to Lord Lister they were met with an unexpected difficulty. Very often when they had to praise other people they found that language paid ample justice to them and that they had used some exaggeration of words in describing their merits. "But in dealing with Lord Lister," he went on to say, "you are dealing with a subject that soars above all the powers of language. He has left behind him a fame which the greatest of earth's creatures would, I think, gladly exchange for theirs. When you endeavour to calculate the range of beneficence which Lord Lister's name represents to all who have suffered under the surgeon's knife, you are at once baffled as regards the power of expressing yourself, and, indeed, although we are rearing memorials to Lord Lister in all parts of the Kingdom—and for all I know in all parts of the universe—he is one of the men to whom, like Shakespeare, memorials seem almost impertinent. Is not every surgical operation a memorial to him? I daresay there are many here who can echo the words of the late King when he said to Lord Lister: 'Were it not for you I should not be here.' Well, fame of that kind outbalances very easily the reputation of all statesmen, of warriors, and of poets possibly, as regards practical utility and beneficence to mankind. I congratulate this University on its periodical habit of commemorating its great men. It cannot commemorate a greater than Lord Lister, and it would be difficult to continue this series with names adequate to his. But, at any rate, let us take the impression of the present moment, and go away from this hall with our hearts full of gratitude for that enormous benefactor of the human race."

Correspondence.

THE HOSPITAL QUESTION.

Sir.—In the report of the opening of a public hospital in a country town, the centre of a wealthy and prosperous district, the following illuminating sentence is ascribed to the Hon. Fred. Flowers (after he had been handed a golden key as a memento):—"He (Mr. Flowers) urged the people to patronize their public hospitals when sick; the pauper stain had been removed, and no inquisitorial questions were asked, as once was the case; he hoped to have a maternity ward in every hospital."

In view of such utterances and the unmistakable trend of Government action, it is not time that the members of the medical profession wakened up, and withdrew their heads from the sand.

Gratuitous attendance upon the sick poor is a privilege of, and an honour to, our profession, but under the guise of this, and under the very laudable attempt to wipe off the "pauper stain" from the deserving, is there not growing a huge system of hospital abuse? The qualms which those quite able to pay for attendance used to feel are soothed by such statements as the above, and the public have been led to believe that in some vague way the medical man receives a quid pro quo for the services rendered in the honorary capacity. That the advertisement and opportunities for self-improvement afforded by a staff position are of value is not disputed, but, looked at from the position of the profession as a whole, is not the state of affairs becoming most undesirable?

What other profession is asked or expected to give such a vast amount of service to the community without payment? The general health of the community is an asset of high commercial value to the nation.

Of late years we have seen a complex legal machine constructed by the Legislature to deal with industrial matters in the interests of the general community. The State does not dream of expecting the legal fraternity to carry out this work except at full rates. How does the reward of a leading barrister engaged in this class of public work compare with that of a MacCormick or a Maitland for analogous public service?

When the Courts allow an individual to litigate "in forma pauperis" it is only done after considerable and searching inquiry far more public and objectionable than the "inquisitorial questions" which Mr. Flowers has deleted.

Are we as a profession to continue to swallow the sugar-coated pill of the pat on the back, and of being told what fine charitable fellows we are, or can we in some way call a halt, and bring the authorities to understand that, while we are quite glad of the privilege to provide gratuitous treatment to the deserving poor, if our services are to be dispensed by a paternal Government to all and sundry, they might be paid for at current market rates?

Do we fail to realize this stealthy encroachment, or are we afraid to assert ourselves?

I am, etc.,

M.B., Ch.M.

Sydney, 18/12/14.

Medical News.

The appointment of Mr. A. W. Green to the Presidency of the State Children Relief Board has been announced. Mr. Green, who is well known to the members of the New South Wales Branch of the British Medical Association, has been associated with the Board for a number of years, and has numerous qualifications fitting him for the position which he has been called upon to fill. The selection is a wise one, for few have made a more complete study of the problems connected with the care of children, few are better equipped to guide the Board along a safe and wise course, and none can excel him in keenness and competence to fulfil the duties attaching to his office. As was stated in last week's issue, the position referred to was vacated by Sir Charles Mackellar, M.L.C., M.B., B.S. Dr. Charles Mackellar was appointed a member of the State Children Relief Board in October, 1882, when it had been in existence for a little over one year. After a few years' service, he resigned his position, in order to take up other important duties, but on the retirement of Sir Arthur Renwick, the President at that time, he was approached, and accepted the position thus rendered vacant. In its early days, the Board, which had been created in conformity with the provisions of the State Children Relief Act, 1881, only carried out eleemosynary relief, by boarding-out State children with suitable guardians, and by placing the children of widows or deserted wives with their mothers. Under the presidency of Sir Charles Mackellar, the functions of the Board were considerably expanded. He aimed at various means of affording protection to infants, and of reducing the mortality among infants. In 1904 he was instrumental in obtaining the sanction of Parliament to a measure, now known as the Infant Protection Act. This Act gave the Board powers to deal with children up to 7 years of age, to place them in private establishments, to institute affiliation proceedings, and to collect moneys from

the male parents for the support of their offsprings. Another legislative measure which affected the utility of the Board was the Neglected Children and Juvenile Offenders' Act, 1905. The effect of this Act was to place between 75 and 80% of the children who had been dealt with by the principal Children's Court under the jurisdiction of the Board, either as children on probation or as inmates in special institutions, private or State homes. The children were, to a great extent, subjected to the control of selected married couples. Other Acts have enabled the Board to extend its activity in various directions, and, with the aid of the legislative and of the administrative machinery, Sir Charles Mackellar achieved marked success in reducing the mortality among infants and children, and in rendering the lot of the less fortunate young citizens of the State more bearable.

It is especially noteworthy that Sir Charles Mackellar was responsible for the introduction of the new system of dealing with delinquent and dependent children. He accepted the responsibility of destroying the old order of things, and the results achieved have fully justified the wisdom of the innovations. He prosecuted a very active campaign, and utilized his position in Parliament to further these ends. In addition to these means, he sought to mould public opinion by the publication of pamphlets, many of which were excellent lessons on the duties of parents and guardians; he also published an elaborate work entitled "The Treatment of Neglected Children and Dependent Children in Great Britain, Europe and America." This work must be recognized as a standard treatise on the subject, and must be taken into consideration in the future shaping of the destinies of children in need of State assistance.

We have great pleasure in recording the selection of Mr. Wilfred S. Kent Hughes, son of Dr. W. Kent Hughes, of Collins Street, Melbourne, Victorian Director of the Australasian Medical Publishing Company, as Rhodes Scholar for 1915. At present Mr. Kent Hughes is serving as a sergeant in the "A" Company, 7th Battalion, 2nd Brigade of the Australian Imperial Force. His military activity will not be interfered with, and he, in common with his fellow Rhodes scholars, will take up his academic studies after his country has obtained a victorious and honourable peace. The new scholar is but 19 years of age. In 1908 he distinguished himself by obtaining the first entrance scholarship to the Melbourne Church of England Grammar School. In 1909, 1910 and 1911 he obtained the Witherby Scholarships. In 1911 he secured the Frederick Sheppard Grimwade Scholarship, and in the same year he passed the senior public examination. In the following year he took first-class honours in chemistry, and divided the exhibition with a comrade, and he also took second-class honours in physics. In 1913 he gained first-class honours in physics, and third-class honours in history, and in 1914 he was honourably mentioned for Greek. He became captain of the school in 1914, having been prefect in 1913. He was co-editor of the "Melburnian," was a member of the Games and Libraries Committees, and of the dramatic society, was "Prime Minister" of the Debating Society, and held various distinguished positions. In regard to sport, his record is not less brilliant than that connected with learning. In 1913, he was in the proud position of being captain and champion of the school and of coming in first in the 440 yards, half-mile, 1 mile and 120 yards hurdle races and in the high jump. Dr. Kent Hughes has, therefore, every reason to be proud of the successes and achievements of his son, and we offer him our hearty congratulations.

Dr. W. T. Hayward has returned from England to Adelaide, after an absence of several months. Before leaving the old country he caused his motor car to be fitted as an ambulance in accordance with the R.A.M.C. regulations and presented it to the authorities for use at the war.

Dr. Te Rangihiroa, formerly member of Parliament for the Northern Maori district, has been offered the position of Medical Officer in command of the Maori contingent.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xiii.

Assistant (part-time) for "Medical Journal of Australia." Hospital Locum, Tasmania.

Diary for the Month.

- Jan. 5.—New South Wales Branch B.M.A., Council Meeting.
 Jan. 12.—New South Wales Branch B.M.A., Council Meeting.
 Jan. 13.—Melbourne Pediatric Society.
 Jan. 14.—Western Medical Association (N.S.W.) at Bathurst.
 Jan. 14.—Victorian Branch, B.M.A., Council Meeting.
 Jan. 15.—Eastern Medical Association, New South Wales, annual meeting.
 Jan. 19.—New South Wales Branch B.M.A., Council Meeting.
 Jan. 20.—Western Australian Branch, B.M.A., Branch Meeting.
 Jan. 26.—New South Wales Branch B.M.A., Committee Meetings.
 Jan. 26.—Victorian Branch B.M.A. (Eye and Ear Section), Annual Meeting.
 Jan. 27.—Victorian Branch B.M.A., Council Meeting.

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute. F.S. Lodges at Longreach. F.S. Lodges at Warwick.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A.
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Australian Natives Association. Balmain United F.S. Dispensary. Burwood District F.S. Institute. Carrington Lodge, No. 75, P.A.F.S. of A., Randwick. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phoenix Mutual Provident Society. F.S. Lodges at Braidwood. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Granville, Penrith and Auburn. Killingworth Colliery, Newcastle. Seaham Colliery No. 1, Newcastle. Seaham Colliery No. 2, Newcastle. West Wallsend Colliery, Wallsend.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to the "Medical Journal of Australia" alone, unless the contrary be stated.

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